HEALTH AND SAFETY

Respirator Fit Testing

FitPro™ Fit Test Software

Version 2

User's Manual

P/N 6001874, Revision F
May 2010

TSI

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HEALTH AND SAFETY

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Contents

ABOUT THIS MANUAL VII

Conventions vii

Trademarks vii

INTRODUCTION IX

Introducing FITPRO™ Fit Test Software ix

CHAPTER 1 1

Computer Requirements for FITPRO™ Software 1

Contents of FITPRO™ Software CD 1

Install FITPRO™ Software 1

Start FITPRO™ Software for the First Time (Program Setup) 2

To Create a New Database 4

Set the Global FitPro Options 5

Setting User Configuration 7

CHAPTER 2 9

Fit Testing with FITPRO™ Software 9

Connect the PORTACOUNT® PRO Respirator Fit Tester 9

Start the PORTACOUNT® PRO Fit Tester and FITPRO™ Software 9

Begin Fit Testing 12

Step 1 - Select a Person 13

Step 2 - Select a Respirator 13

Step 3 – Select a Protocol 15

Step 4 - Start the Fit Test 16

CHAPTER 3 19

Convert FitPlus v3 Databases to FITPRO™ Software Format 19

CHAPTER 4 21

FITPRO™ Menu Options 21

File Menu 22

Report Print Settings 22

Card Print Settings 22

Exit 23

Database Menu 23

PORTACOUNT® Menu 23

Fit Test 23

Real-Time 23

Daily Checks 24

Report Menu 27

Select Report 27

Single Fit Test 27

Setup Menu **27**
Global FitPro Options 27
Communication Ports 27
Help Menu **28**
Help File Contents 28
About FITPRO™ Software 28
CHAPTER 5 ..... **29**
Database Management and Operation **29**
Database Menu **30**
Flash Drive Database Exchange 30
Edit 32
Edit or View the People Table 32
Edit or View the Protocol Table 35
Edit or View the Respirator Table 38
Edit or View the Fit Test Table 39
Change Active 41
Copy… 41
Export 43
Export Data in Excel Format 43
Export Data in Comma Separated Value Format 44
Backup 45
Restore 45
Utilities 46
Split Database… 46
Convert Database 48
Merge 48
Apply Custom Names 50
Move/Copy Data 51
Advanced Edit/Delete 53
CHAPTER 6 ..... **55**
Create, Modify, and Print Reports **55**
The Report Wizard 57
Report Examples 60
Example 1 – Modified Fit Test Report 60
Example 2 – Past Due Report 60
FITPRO™ Software Printing 61
Windows Internet Explorer® Version Differences 61
Windows Vista® Operating System 61
APPENDIX A **63**
Print Fit Test Cards **63**
Printer Setup 63
TSI Model 8907 Supplies and Specifications (Fargo DTC300 and C30 Card Printer) **66**
Reordering Card Printer Supplies 66
Specifications* for Fargo C30 and DTC300 (TSI Model 8907) Card Printer 67

APPENDIX B 69
Advanced FITPRO™ Software Installation Instructions 69
Database Details 69
Configure SQL Server for a Database on Network 69

INDEX 73

Figures

Figure 1. Change Active Database Dialog 2
Figure 2. Advanced Options of the Change Active Database Dialog 3
Figure 3. FITPRO Desktop 4
Figure 4. Create New Database Dialog 4
Figure 5. Global FitPro Options Dialog 5
Figure 6. User Configuration Dialog 7
Figure 7. Add a Custom Name 8
Figure 8. Click Edit to Add Custom Values 8
Figure 9. The Edit Values Dialog 8
Figure 10. Select a Person for the Fit Test 13
Figure 11. Select a Respirator for the Fit Test 14
Figure 12. Select a Protocol for the Fit Test 15
Figure 13. Running the Fit Test 17
Figure 14. Convert Database Dialog 19
Figure 15. Printer Page Setup 22
Figure 16. Real Time Fit Factor Display 24
Figure 17. Daily Checks Dialog 26
Figure 18. Select Address Dialog 28
Figure 19. Flash Drive Database Exchange Dialog 31
Figure 20. Edit People Table Dialog 33
Figure 21. Edit Protocol Table Dialog 35
Figure 22. Sample Timing Dialog 37
Figure 23. Edit Respirator Table Dialog 38
Figure 24. Edit Fit Test Table Dialog 40
Figure 25. Make a Copy of a Database Dialog 42
Figure 26. Export Data in Excel Format 43
Figure 27. Export Data in CSV Format 44
Figure 28. Backup Database Dialog 45
Figure 29. Restore Database Dialog 46
Figure 30. Split Database by Date Dialog 47
Figure 31. Merge Database Dialog 49
Figure 32. Apply Names to Custom Fields Dialog 51
Figure 33. Move/Copy Data from one Database to Another Dialog 52
Figure 34. Advanced Edit Records Dialog 53
Figure 35. Select Report Dialog 56

Figure A-1. Page Setup Dialog.....64
Figure A-2. Fit Test Card Options.....65
Figure A-3. Change Settings Dialog 65

About This Manual

This manual describes how to install, set up, and use FITPRO™ Fit Test Software (referred to as FITPRO™ software). FITPRO™ software is intended for use with the Model 8030 PORTACOUNT® PRO and Model 8038 PORTACOUNT® PRO+ Respirator Fit Testers.

The Model 8030 is designed to measure the fit factors of masks with an efficiency of 99% or greater. The Model 8038 includes an N95-Companion™ technology, which lets you measure any tight-fitting respirator including N95, P2 and P1 disposables.

Conventions

The following conventions are used throughout this manual:

Convention	Description
Boldface	Menu options and dialog box fields and buttons are shown in boldface type. For example: Click **Next>>** to continue.
F	Keyboard key names, such as the F key, are shown in keyboard type.
The "|" Character	The phrase "select **Database | Utilities | Convert"** means pull down the **Database** menu, select **Utilities**, then select **Convert** on the menu.
Underlined Characters	Menu items can be selected with the mouse or by pressing the A key and the shortcut key for the menu or option. The shortcut key is underlined on the screen display. For example, to select the **File** menu, press A then F. If you do not see underlined menu items on your screen, Microsoft Windows has not been configured to show them unless you press the A key first.

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- Download application notes.
- Download instruction manuals.
- Download product brochures.
- Register your PORTACOUNT® PRO Respirator Fit Tester.
- Obtain a return material authorization (RMA) number before sending your PORTACOUNT® PRO fit tester in for service.

Introduction

Introducing FITPRO™ Fit Test Software

FITPRO™ software is designed for use with the Model 8030 PORTACOUNT® PRO and Model 8038 PORTACOUNT® PRO+ Respirator Fit Testers. FITPRO™ software features include:

- Full automation of the fit test process.
- A single database in Microsoft® SQL Server® format with People, Respirator, Protocol, Fit Test, and Daily tables.
- User Interface in five languages including English, German, French, Swedish, and Spanish.
- Database management tasks such as merging, moving, copying, and deleting records; copying, merging, and exporting databases, and more.
- Database backup and restore.
- Exchange databases with the PORTACOUNT® PRO fit tester through use of a flash drive.
- Expanded report capabilities, including one that indicates who is due for a fit test. There is also a single page report for each test subject, custom designed reports, and other reports.
- Daily diagnostic checks.
- A real-time fit factor display for use in respirator training.
- Printing of fit test reports and fit test cards (using optional card printer).

Note Certain functions of the user interface of the PORTACOUNT® PRO fit tester are "locked out" when using the FITPRO™ Fit Test software, refer to PORTACOUNT® PRO Respirator Fit Tester Operation and Service Manual.

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Chapter 1

Computer Requirements for FITPRO™ Software

- Personal computer running Windows® XP (32-bit), Windows Vista® (32-bit), or Windows® 7 (32-bit and 64-bit) operating system
- Microsoft .Net. The installation software will install .NET if necessary.
- Microsoft SQL Server® 2005 Express Edition. The installation software will install SQL Server 2005 Express Edition if necessary.
- A 1 GHz or faster processor
- 500 MB free space on hard drive
- 1 USB port
- A CD-ROM reader (to install the software)

Contents of FITPRO™ Software CD

The CD-ROM "PORTACOUNT® PRO Technical Reference and FITPRO™ software CD" contains:

- The FITPRO™ Software installation files
- The FITPRO™ Software installation guide in PDF format
- The FITPRO™ User's Manual (this manual) in PDF format
- PORTACOUNT® PRO/PORTACOUNT® PRO+ manual in PDF format
- PORTACOUNT® USB driver files
- Product registration link
- Various application notes
- Various fit test regulations
- Links to the TSI web site (http://www.tsi.com)
- And more

Install FITPRO™ Software

Refer to the FITPRO™ software installation guide (P/N 6002211) for complete installation instructions.

A hard copy of the FITPRO™ software installation guide is included with your PORTACOUNT® instrument shipment. You can print the installation guide from the FITPRO™ Software CD.

Once you have installed FITPRO™, start FITPRO™ software to complete program setup, which is described in the following section.

Start FITPRO™ Software for the First Time (Program Setup)

1. Find the **FITPRO** icon on your Windows desktop and click it. (You can also start FITPRO™ software by selecting **Programs** from the **Start** menu. Look under **TSI** and select **FITPRO** to start the program.)
2. When FITPRO™ software starts, the **Change Active Database** dialog (Figure 1) appears.

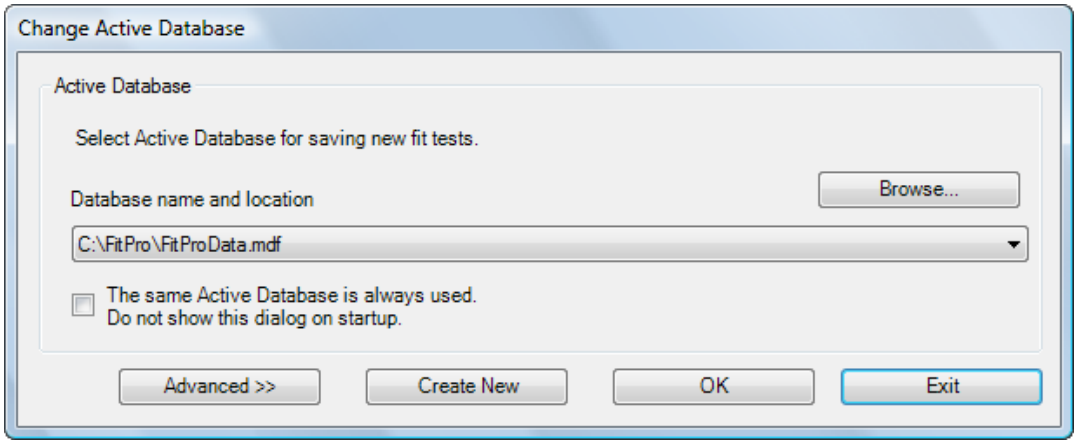


Figure 1. Change Active Database Dialog

This dialog lets you select a database to use for storing fit test results. The database you choose remains the default active database until you change it. The default database file is "FitProData.mdf." This database is empty, with the exception of the protocol table, which has four protocol records commonly used for fit testing.

Unless you have converted FitPlus™ databases for use with FITPRO™ software – see Chapter 3), the only available database file will be the default file.

The following table describes the fields and buttons of the Change Active Database dialog. You may have to click **Advanced** (Figure 2) to view all the fields and buttons.

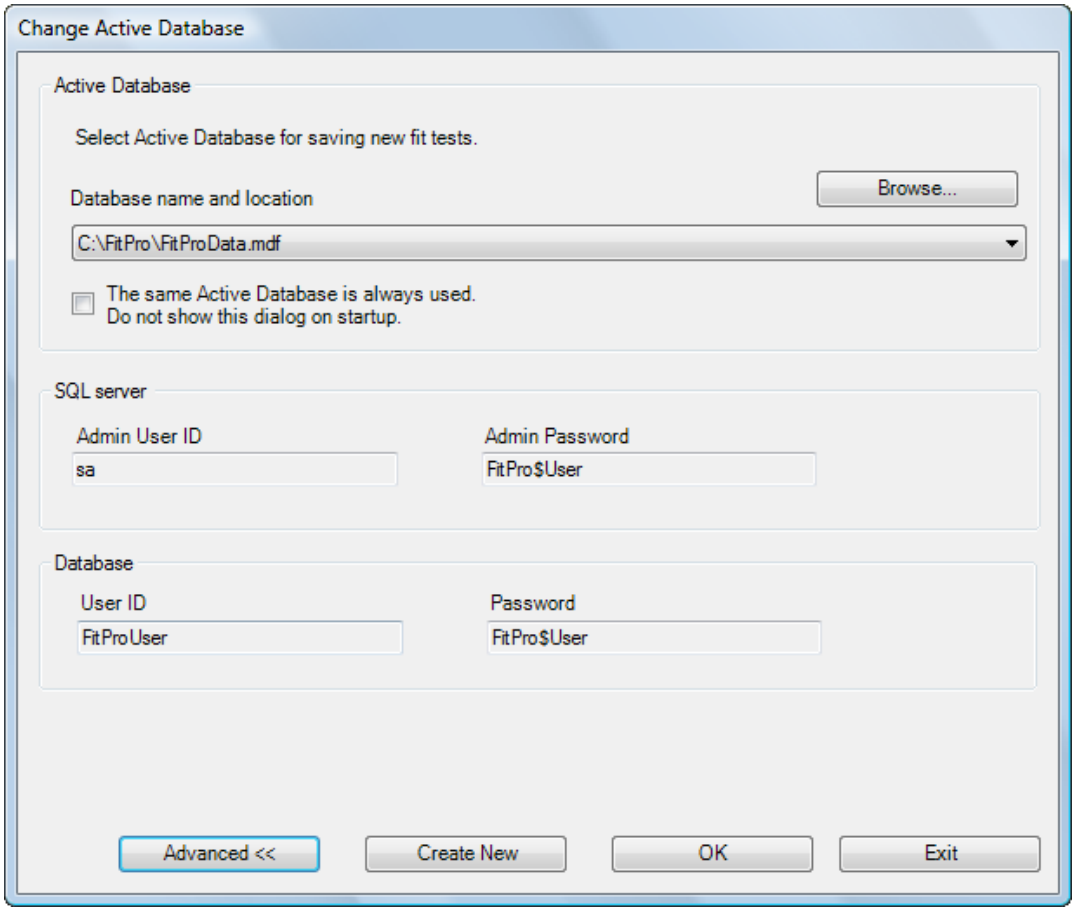


Figure 2. Advanced Options of the Change Active Database Dialog

Field or Button	Description
Admin Password	SQL Server® administrator password. Default: FitPro$User (case sensitive).
Admin User ID	SQL Server® administrator user ID: Default: sa
Advanced	Extends the Change Active Database dialog to display the Advanced items available.
Browse	Lets you search other drives/folders for database files.
Create New	Lets you create a new (empty) database file.
Database Password	Password to login to the FITPRO™ database. Default: FitPro$User (case sensitive).
Database User ID	User ID for the FITPRO™ database: Default: FitProUser (case sensitive).
Exit	Exits the FITPRO™ program.
OK	Accepts the database you have chosen, and opens the FITPRO™ desktop.

Field or Button	Description
Database name and location	Displays the name of the currently selected database. Use the down arrow to view and select previously used database files or use **Browse** to search for a folder/file that contains FITPRO™ databases.
The same Active Database is always used. Do not show this dialog on startup	This checkbox lets you bypass this dialog in the future. If you intend to use the same database most or all of the time, check this box. If you expect to use other databases regularly, leave it unchecked. You can reset this dialog from **Database | Change Active** or **Setup | Global Fit Test Options**.

Click **OK** to use the default database or the database you selected using **Browse**. The FITPRO™ desktop appears (Figure 3). You will be prompted to perform the Daily Checks. The active database path is displayed in the title bar of the FITPRO™ desktop. If you want to create a new database, follow the instructions below.

Figure 3. FITPRO Desktop

To Create a New Database

1. On the Change Active Database dialog, click **Create New** and enter the filename of the new database or click **Browse** to select a drive and folder and then enter the name of the database. The default database name is the current active database, which you can modify to create a new database.

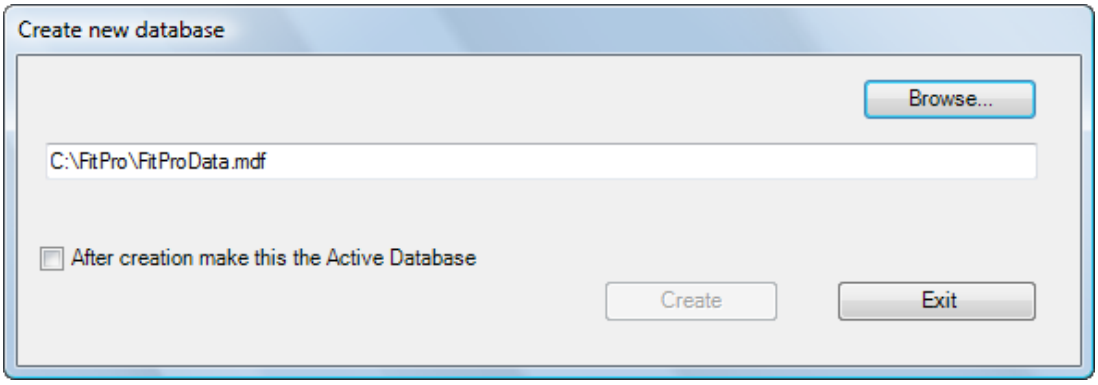


Figure 4. Create New Database Dialog

2. If you want the new database to become the Active Database, put a check mark in the **After creation make this the Active Database** box.

3. Once you have selected the desired database filename, click **Create** to continue.

   ***Note**: When you create a new database, it contains a populated Protocol Table so you can start using it for fit testing right away.*

4. Click **OK** to close the Change Active Database dialog.

Set the Global FitPro Options

Global FitPro Options affect how FITPRO™ software operates. Before you do any fit testing, make sure all the options are set the way you want them. Settings remain in effect until you change them.

To view or change Global FitPro Options, select **Setup** | **Global FitPro Options** or click
The Global FitPro Options dialog opens (Figure 5).

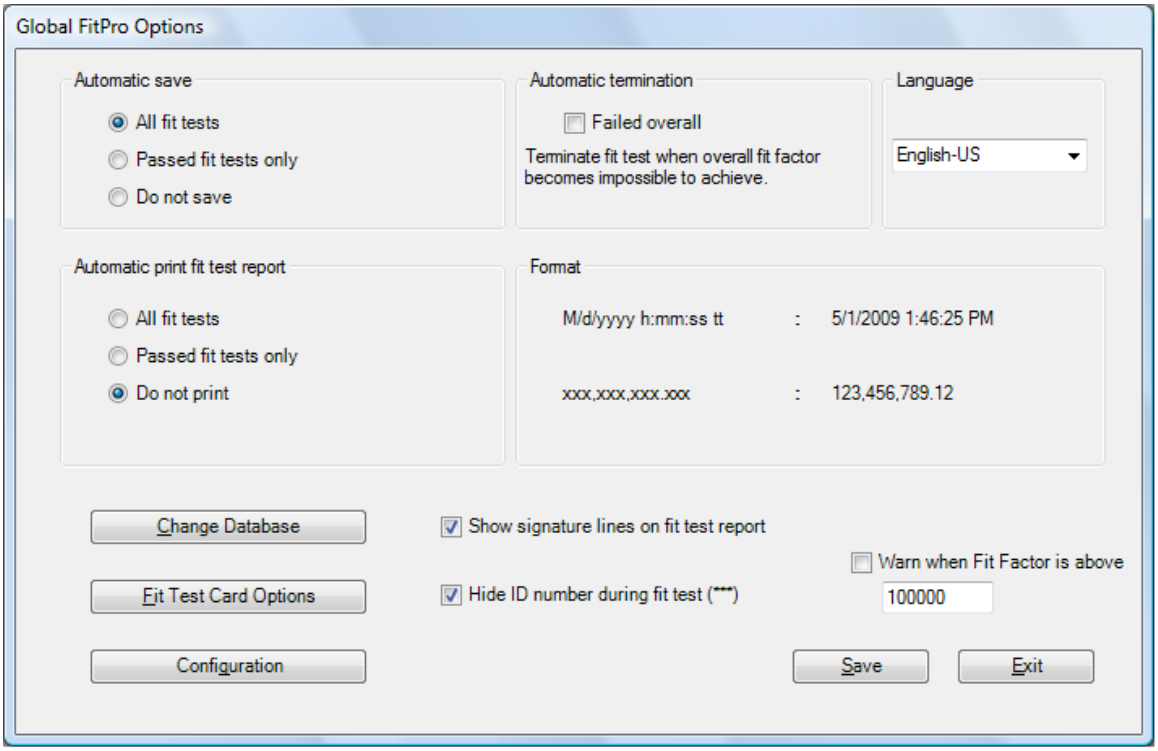


Figure 5. Global FitPro Options Dialog

The fields and buttons on the dialog are described below.

Field or Button	Description
Automatic Save	Lets you select which fit test data is saved. There are three options: • **All Fit Tests** Saves all fit test results whether the test is incomplete, aborted, passed, or failed. This selection results in a large amount of data that may not be useful. • **Passed Fit Tests Only** The default choice. Saves only fit test records for those that pass. These are the only records that contain meaningful data. • **Do Not Save** For running training or demonstration fit tests. Lets you interact with a complete database without storing training data.
Automatic Print Fit Test Report	Automatically prints one test report at the end of each fit test. This is useful if you plan to give the test subject a copy of the test results or if you save hard-copy test records. The report is sent to the default Windows printer. You have three options • **All Fit Tests** Prints a report for each fit test, even if it is a failed or aborted test. • **Passed Fit Tests Only** Prints a report only if the fit test passes. • **Do Not Print** This is the default choice. Use this if no printer is available during fit testing. The report can be printed later. ***Note:*** *The printer must be set up before automatic reports are generated at the end of fit tests.*
Automatic Termination (Failed Overall)	If selected, the Failed Overall checkbox automatically terminates the fit test when the overall fit factor becomes impossible to achieve. The default is off. ***Note:*** *Specifies what to do if an exercise fit factor is so low that passing the entire fit test becomes mathematically impossible. FITPRO™ software allows the test to continue unless this box is checked. If the box is left unchecked, the test operator can choose to let the test continue or manually stop the test.*
Change Database	Access the **Change Active Database** dialog. See above for details
Configuration	Displays the User Configuration dialog. See below for information.
Fit Test Card Options	Sets the options for printing fit test cards. See Appendix A for information.
Format	Displays the date and number formats used for the language you have selected. You cannot change the date or number format unless you select another language and formatting combination from the list box.
Hide ID number during fit test	Hides the ID number of the fit test subject while the fit test is progressing. The ID number is visible when entering information about a new person. Later it is replaced by asterisks(*). This feature is useful when the person's social security number is used as their ID number.

Field or Button	Description
Language	Lets you select the language and formatting combination you want to use when you run the software. When you select a language, all software information is instantly displayed in that language and formatting. The available options are Español, Francais, Deutsch, Svenske, English-US, English-UK, and English-24 Hour. English-US is the default language and formatting combination.
Show Signature Lines on Fit Test Report	The single-page fit test report has an area at the bottom for the test subject and test operator to sign. This is useful when maintaining paper records of fit tests. If you do not require signatures, uncheck this box; signature lines will not print. This option is enabled by default.
Warn When Fit Factor is Above…	This option is disabled (unchecked) by default. If it is enabled (checked), a warning message appears when the fit factor for any exercise exceeds the value you enter. The test continues despite the warning message. The purpose of the warning is to alert an inexperienced fit test operator that something *may* be wrong, such as a blocked sample tube. If this option is enabled, the value should be set at a fit factor level that will almost never occur unless something *is* wrong. A blocked mask sample tube will often result in fit factors well over 500,000. The default value is 100,000; however, you may have to select a higher value more appropriate for the types of respirators you use and other considerations.

Setting User Configuration

The User Configuration dialog (Figure 6) lets you configure fields in the People Table that let you store specific information about each person, such as department, job title, medical status, shift, and so on.

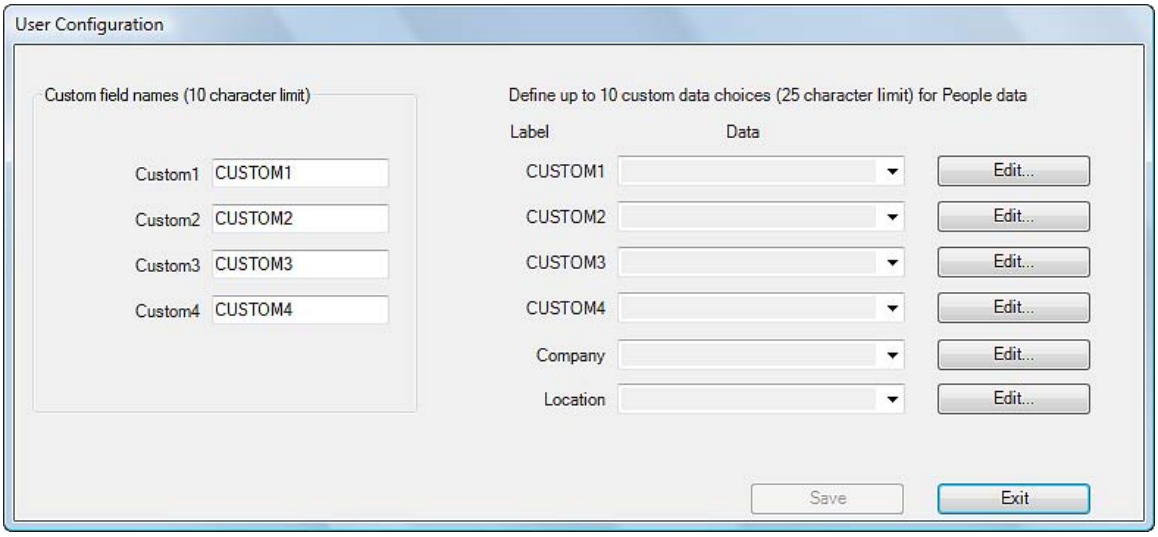


Figure 6. User Configuration Dialog

The User Configuration dialog has four custom field names (Custom1…Custom4) and two additional labels (Company and Location).

The custom field names can be modified. The Company and Location labels cannot be changed. You can specify up to 10 values for each of the six labels. Select custom field names that do not

duplicate the predefined fields in the People Table. The predefined fields are: Last Name, First Name, ID Number, Company, and Location.

To add a custom field, type the custom name in one of the spaces provided. The name you type will replace the label name (see Figure 7).

Figure 7. Add a Custom Name

To add (or delete) a value for any of the labels, click **Edit** next to the label name. A dialog box appears that shows the current values (Figure 8 and 9). Click **Add**, type in the value you want to use, and click **Save**. Similarly, you can delete or rename a value by selecting it from the window and pressing **Delete** or **Rename**.

Figure 8. Click Edit to Add Custom Values

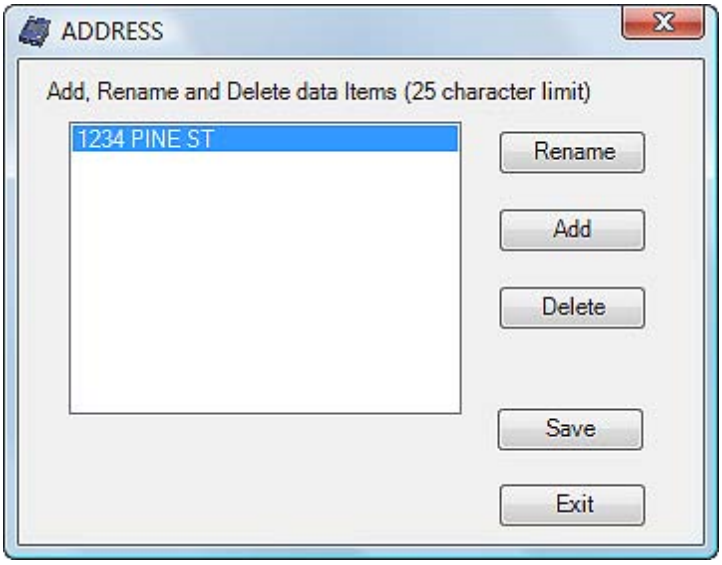


Figure 9. The Edit Values Dialog

You can change the custom field names at any time; however changing them on this dialog box only affects future fit tests. All data stored in the People Table (and Fit Test Table) retain the custom field names that were in effect at the time the record was created.

***Note**: You can change the custom field names stored in pre-existing records using the **Database | Utilities | Apply Custom Names** menu. Refer to Chapter 5 for details.*

The FITPRO™ software program is now set up and ready for Fit Testing.

Chapter 2

Fit Testing with FITPRO™ Software

This chapter describes how to connect the PORTACOUNT® PRO Respirator Fit Tester to your computer and perform a fit test with FITPRO™ software.

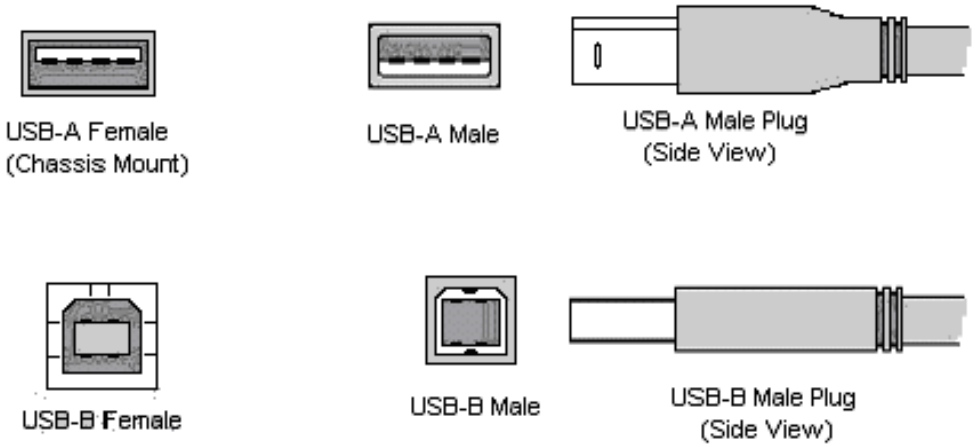
As described in the PORTACOUNT® PRO Respirator Fit Tester Operation and Service manual, you should know how to run fit tests using the instrument in stand-alone mode (without the computer). If you have not run fit tests in stand-alone mode, familiarize yourself with that procedure **before** using the FITPRO™ software.

***Note**: FITPRO™ software must be installed according to the procedure in Chapter 1 before you can perform fit testing as outlined in this chapter.*

Connect the PORTACOUNT® PRO Respirator Fit Tester

The Respirator Fit Tester connects to a USB port on your computer.

1. Plug the "A" type end of the USB cable shipped with the PORTACOUNT® PRO fit tester into a USB port on your computer.
2. Plug the "B" type end of the USB cable into the USB Port located on the back of the PORTACOUNT® PRO fit tester.



3. Make sure the PORTACOUNT PRO® Respirator Fit Tester is set up and operational. The *PORTACOUNT® PRO Operation and Service Manual* contains the instructions you need if you are not already familiar with setting up the instrument.

Start the PORTACOUNT® PRO Fit Tester and FITPRO™ Software

1. Press the **On/Off** button to turn the PORTACOUNT® PRO fit tester on and wait until a dialog box appears asking whether you want to perform Daily Checks (approximately 60 seconds).

2. Start the FITPRO™ software (***Note**: If using Windows Vista® operating system, you **must** right-click on the mouse and select **Run as Administrator***). This ensures FITPRO™ software automatically identifies the USB port on which the PORTACOUNT® PRO fit tester is connected. Once the FITPRO™ software begins a fit test, daily check, or opens the real time display, you can no longer perform these operations on the PORTACOUNT® PRO fit tester itself; the operations must be performed using FITPRO™ software. At the end of a fit test, daily check, or real time display, FITPRO software gives up control and the PORTACOUNT® PRO fit tester can again be used in stand-alone mode.

   Note: *If this is the first time you have started FITPRO™ with the PORTACOUNT PRO® Fit Tester attached, you are informed that Windows has detected new hardware and asked to install drivers. The drivers were installed in the FITPRO™ folder (assuming you accepted the default folder). Navigate to the folder and select rndismpy.sys. The driver should install automatically. Drivers are also available on the CDROM containing the FITPRO™ software install. A similar "new hardware" dialog appears if a different PORTACOUNT® fit tester is connected. Select **Install the software automatically (Recommended)** since the drivers are already installed and Windows knows which driver to use.*

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
TSI USB Remote NDIS Network Device
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

   The first dialog displayed is the Change Active Database dialog (unless you turned this feature off, see Chapter 1).

   If the Change Active Database dialog appears, select the default database or **Browse** for the database you want to use to store fit test results. After the active database is shown, click **OK**.

   The software checks the database structure of the selected file. The main screen appears and you are ready to begin fit testing.

If FITPRO™ software cannot open or access the database, an error is displayed, and the selected database name is removed from the list and the next available database name is displayed.

To remove these errors, consult your IT department or select another database.

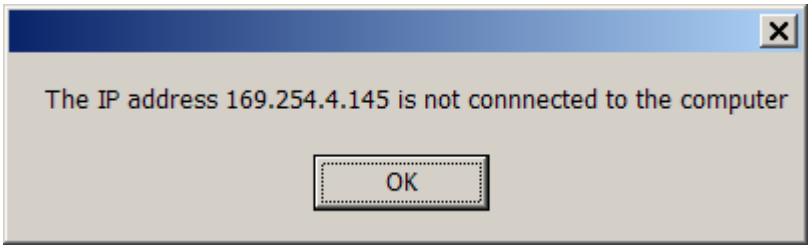
W A R N I N G
Do ***not*** change the structure of the FITPRO™ database.

If the FITPRO™ software folder or the selected active database is read-only, a dialog is displayed to inform you that it is read only.

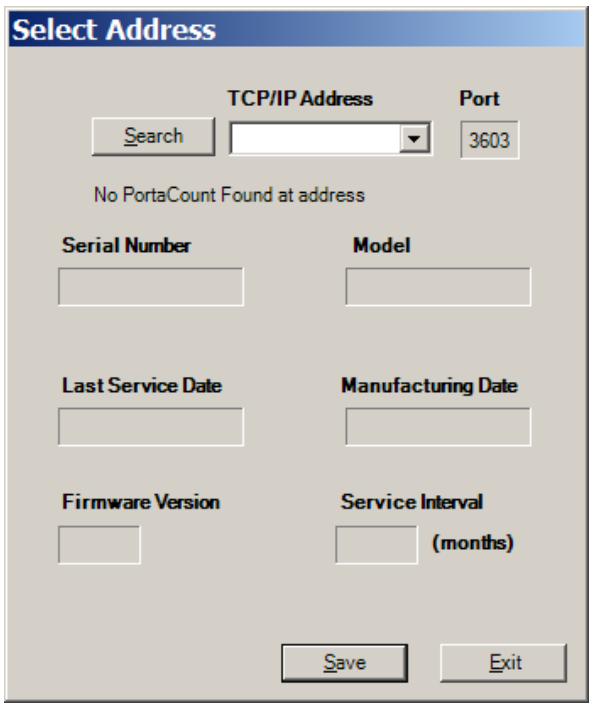
Note: *FITPRO™ software always expects the same PORTACOUNT® fit tester to be used as the last time FITPRO™ software was started. If the same PORTACOUNT® fit tester is not found, the user is alerted. You are also alerted if you did not start the PORTACOUNT® PRO fit tester yet, or if the PORTACOUNT® PRO fit tester has not completed the warm-up period. You will receive a message similar to the following:*

PortaCount is not responding or could not be found.
Make sure communication cable is connected properly
Make sure PortaCount is powered ON and warm-up is complete.
OK

If this happens, start the PORTACOUNT® PRO fit tester and wait for the warm-up period to finish. If FITPRO™ software cannot connect to the PORTACOUNT PRO fit tester for some reason, you may receive a message similar to the following:



*Select **Setup | Communication Ports**. The USB Connection dialog is displayed (see below).*



*If you inadvertently connected to a PORTACOUNT® fit tester you didn't intend to use, change the PORTACOUNT® fit tester. If you want to work with a different PORTACOUNT® fit tester, select the address from the drop down list **TCP/IP Address**.*

*You can also click **Search** to find the PORTACOUNT® PRO fit tester. When the device is found the information on the dialog is filled in.*

*After the address is correct click **Save**, then **Exit**.*

Begin Fit Testing

Start the fit test by selecting **PortaCount | Fit Test** or .

The **Run Test: Fit test step 1 of 4** dialog box appears (Figure 10) and displays the record of the first person in the **People** database. Records are in alphabetical order starting with the Last Name.

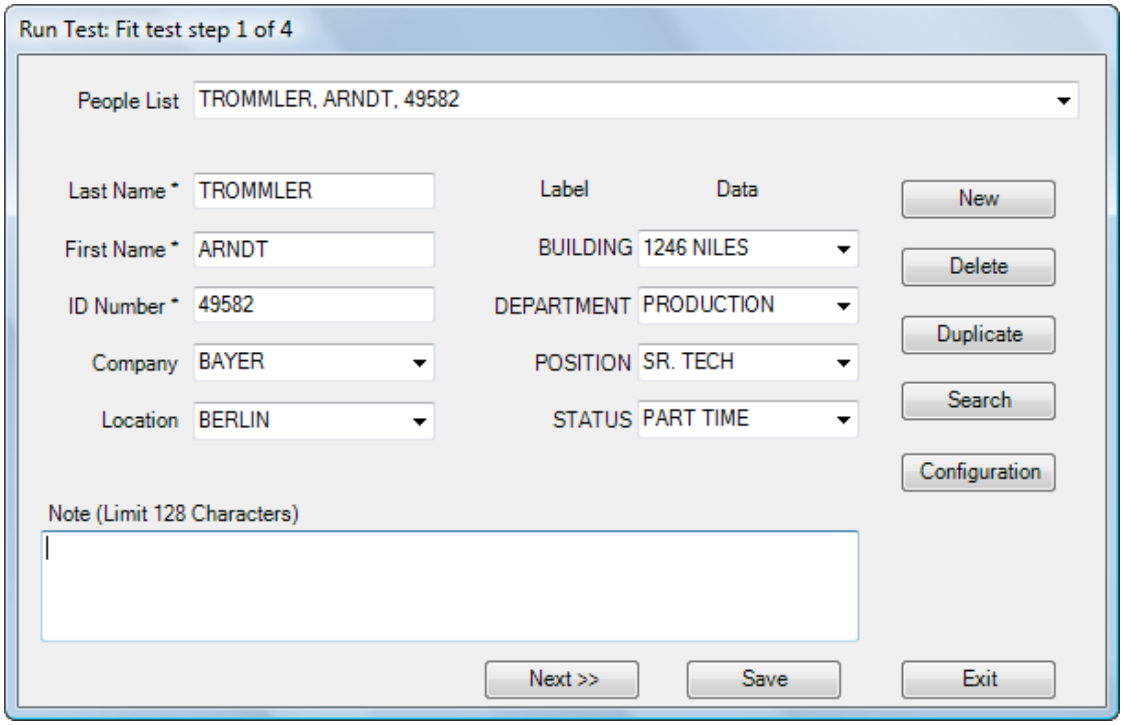


Figure 10. Select a Person for the Fit Test

Step 1 - Select a Person

1. Select the person to fit test as follows:

   a) If the person shown on the dialog is the one you want to fit test, start the fit test by clicking **NEXT >>.** If you prefer, you can make updates to the database record before you start the fit test (refer to Edit or View the People Table in Chapter 5). If you want to make updates or add information to the person's record, make the changes and then press **SAVE**.

   b) If the person shown on the dialog is not the one you want to fit test, click the arrow on the **People List** field to display the names in the People Table (or use **Search** to find a name), click on the name and then verify the correct name is displayed, then proceed as in 1a, above.

   Note: *If the person you want to fit test is not in the database, or if no records are in the database, click* ***New*** *and create a record by typing in the information required, then click* ***Save****. The People Table is always blank when you use a new database file. Refer to Chapter 5 for detailed descriptions of the fields in the table.*

2. Wait for the dialog to refresh, then click **NEXT>>** to continue.

Step 2 - Select a Respirator

When the **Run Test: Fit test step 2 of 4** dialog box appears (Figure 11), the display shows the name of the respirator you used last.

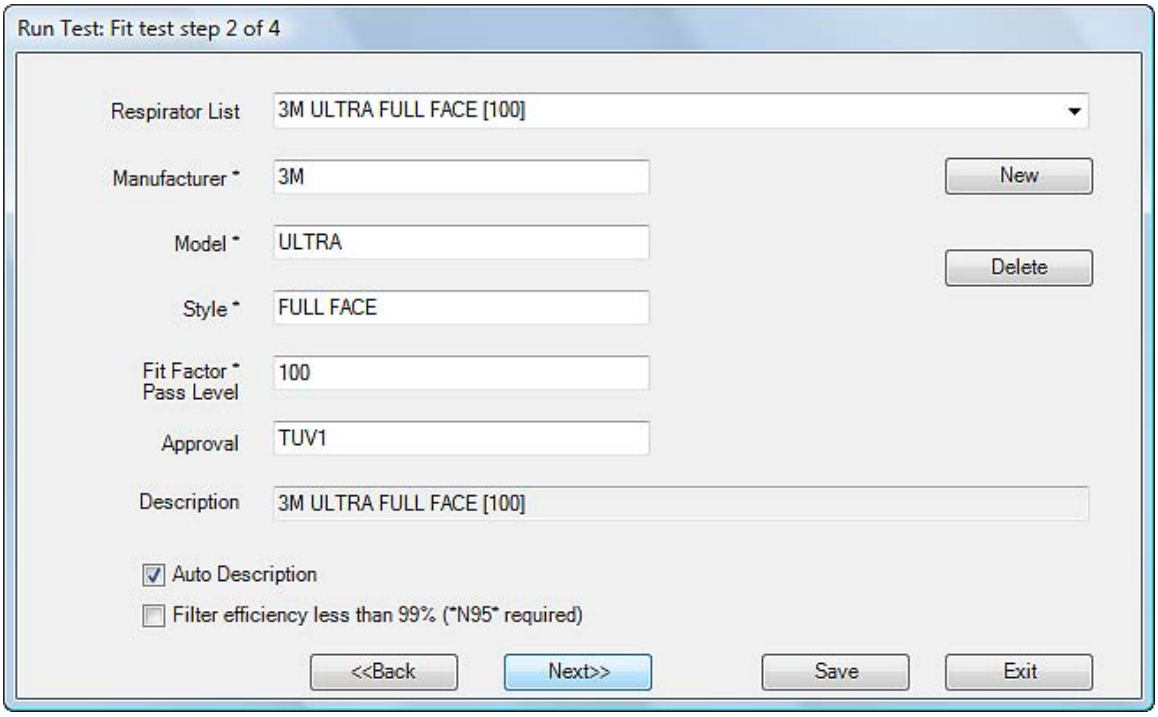


Figure 11. Select a Respirator for the Fit Test

1. Select the respirator to use as follows:

   a) If the respirator you want to use is displayed, click **Next>>**. Otherwise select the respirator as follows:

   b) If the respirator you want to use is not displayed, click the arrow on the **Respirator List** field to display a list of all the respirators in the table. Records are in alphabetical order. Use the scroll bar to find the respirator you want to use and select it.

      Note: If the respirator you want to use for fit tests is not in the database, or if no records are in the database, click **New** and create a new record by typing in the information required. The Respirator Table is always blank when you use a new database file. Refer to *Chapter 5* for detailed descriptions of the fields in the table**.**

2. If the respirator you are fit testing has an efficiency less than 99%, check the "Filter efficiency less than 99% (*N95* required)" box. To fit test respirators with less than 99% efficiency, you must use a PORTACOUNT® PRO Model 8038.

   Note: *You can verify the model number of the PORTACOUNT® PRO fit tester you are using from* ***Setup | Communication Ports.***

3. Verify the correct respirator is displayed, click **Next>>** to continue.

Step 3 – Select a Protocol

When the **Run Test: Fit Test step 3 of 4** dialog box appears (Figure 12), the mask size and operator fields are blank. You must fill in these fields before you can continue.

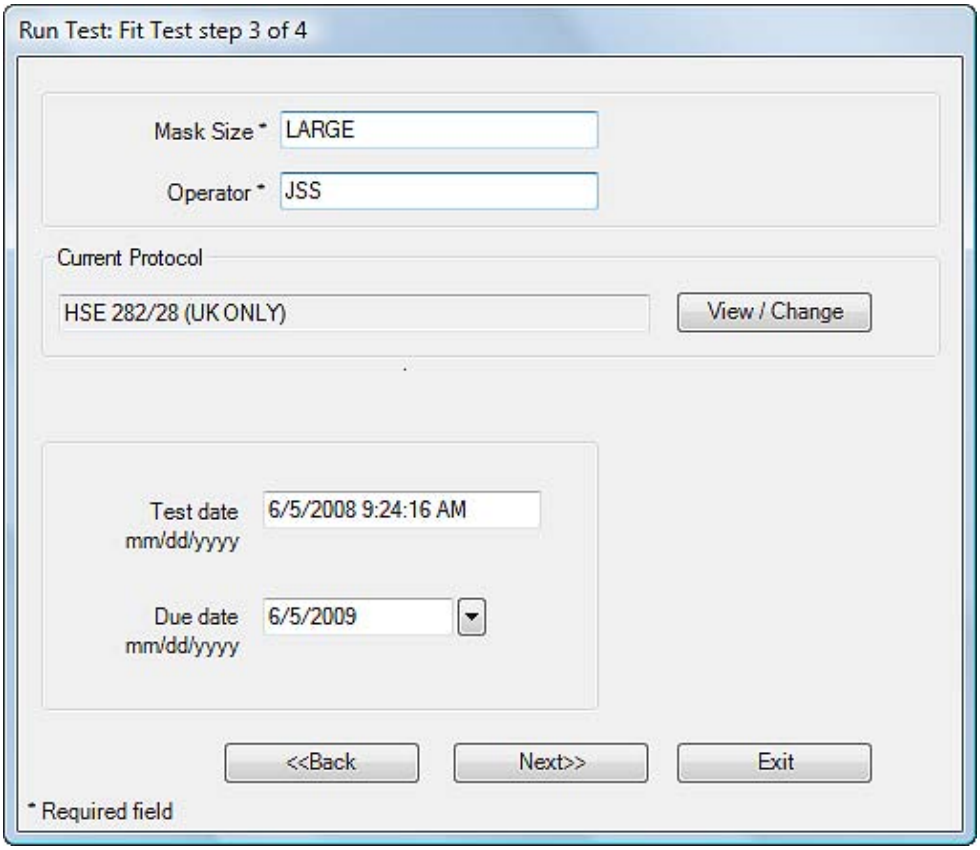


Figure 12. Select a Protocol for the Fit Test

1. Fill in the **Mask Size** field (for example: SMALL, MEDIUM, or LARGE). This is a required field; 25 characters maximum.

2. Fill in your name or initials in the **Operator** field. This is a required field; 25 characters maximum.

3. Make certain the exercise protocol shown in the Current Protocol field is the one you want to use. If it is not the one you want to use, exit the Fit Test and select **Database | Edit | Protocol Table** from the menu. Select the protocol from the list box that you want to use and click the **Save** button. When you are prompted to make the current protocol the default protocol, click the **Yes** button. It will remain the default until you change it. The default protocol will be used when you perform a Fit Test. Most organizations always use the same exercise protocol. See Chapter 5 for details on managing fit test exercise protocols.

   The due date is determined from the protocol duration number, usually 12 months. If you want to change this person's next fit test **Due Date** to a date more convenient than calculated, type in a different date or click the down arrow to display a calendar and select the date from the calendar.

4. Click **Next>>** to continue.

Step 4 - Start the Fit Test

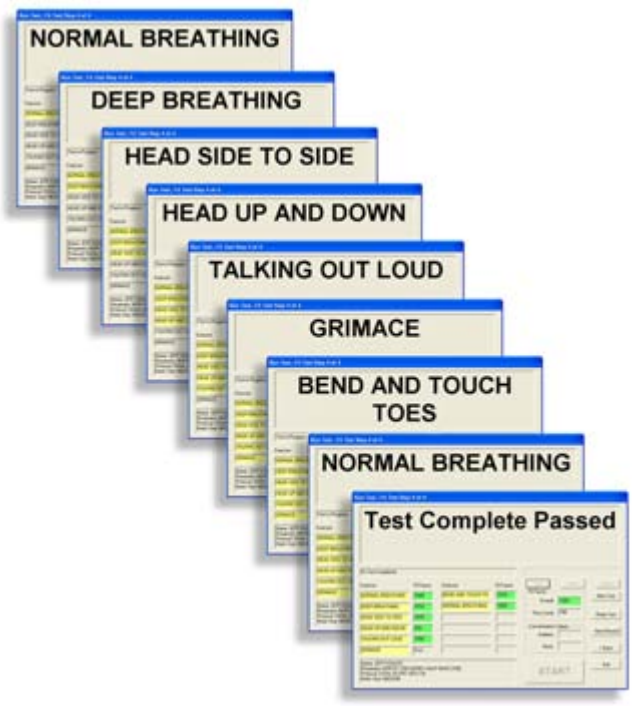
When the **Run Test: Fit test step 4 of 4** dialog box appears, you are ready to begin the fit test.

Before you click **START** to begin the fit test, verify the information at the bottom left of the display, make certain the PORTACOUNT® PRO sample tube is connected to the respirator, and ask the test subject if they are ready to begin the exercise protocol immediately. Refer to the *PORTACOUNT® PRO Respirator Fit Tester Operation and Service Manual* if you need additional information.

1. Click **START**.

   Fit testing begins immediately, and the first exercise description appears. The elapsed exercise time also appears as a graphic progress bar. As each exercise completes, the result appears in the **Fit Factor** column. The **Ambient** and **Mask** fields show the ambient and mask particle concentrations as they are measured.

2. FITPRO™ software beeps to indicate that it is time to begin the next exercise. The exercises proceed one after another without pause. The current exercise is highlighted in yellow. Exercises that pass are highlighted in green. Exercises that fail are highlighted in red.



Note: ***a)*** *If the **alcohol level is low**, a warning is displayed in yellow (as shown in Figure 13). Stop the test and refill the alcohol cartridge (see the PORTACOUNT® PRO Respirator Fit Tester Operations and Service manual).*

b) *If the particle count is above the minimum required level but below an acceptable level, a warning is displayed. Stop the test. Run the Daily Checks (to determine the minimum particle count number) and determine what the problem is (see the Troubleshooting chapter in the PORTACOUNT® PRO Respirator Fit Tester Operations and Service manual).*

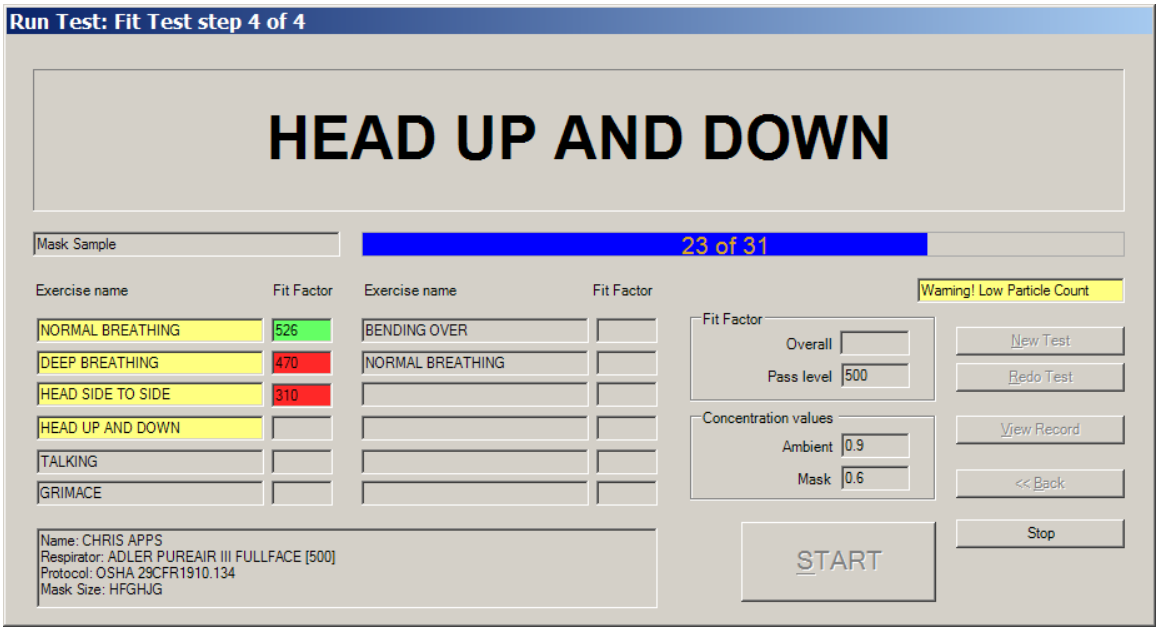


Figure 13. Running the Fit Test

3. FITPRO™ software beeps three times when the fit test is complete. The upper section of the dialog box displays either "pass" or "fail." Pass or fail is determined by comparing the overall fit factor to the Fit Factor Pass Level. The overall fit factor is displayed at the upper right.

4. To begin a test on another person, click **New Test**, to redo the test on the same person click **Redo Test**, to exit fit testing click **Exit**, and to view the detailed fit test record for the fit test just completed click **View Record**. Click **Back** to display the **Protocol Information** dialog box.

   If you click **View Record** at the completion of a fit test, detailed information from the fit test you just finished is displayed. You can also print a single page fit test report or fit test card.

   See "Edit or View the Fit Test Table" in Chapter 5 for descriptions of the fields and buttons of the Fit Test Data dialog.

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Chapter 3

Convert FitPlus v3 Databases to FITPRO™ Software Format

This chapter describes the process of converting FitPlus™ v3 databases to the new FITPRO™ software format.

***Note**: Do **not** use FitPlus v3 after FITPRO™ software is installed unless absolutely necessary. Installing FITPRO™ and converting old databases to the new format will not alter your FitPlus v3 installation in any way. You can run FitPlus v3 after you install FITPRO™ software, if necessary; however, if you do that, there is be no easy way to transfer new fit test data from v3 to FITPRO™ software. Once you are comfortable with FITPRO™ software and have converted all necessary fit test data, you should uninstall FitPlus v3 or delete the shortcut icon from the Windows desktop to avoid confusion.*

FitPlus v3 used Microsoft Access™ database software to store all fit test data. This file has the extension of .mdb. This file contains tables to store People, Protocol, Respirator, and Fit Test data.

FITPRO™ software uses Microsoft® SQL Server® Express 2005 to store all fit test data. This file has the extension of .mdf. This file contains separate People, Protocol, Respirator, and Fit Test Tables.

To continue using the FitPlus v3 data with FITPRO™ software, the data has to be converted into Microsoft SQL Server® format. The Convert Database function facilitates this conversion.

Converting data from FitPlus v3 to FITPRO™ software will not damage, modify, or move the original v3 databases. The FitPlus v3 software will continue to operate with the original data.

To convert FitPlus v3 data into FITPRO™ software format:

1. Select **Database** | **Utilities** | **Convert**. The Convert Database dialog appears (Figure 14).

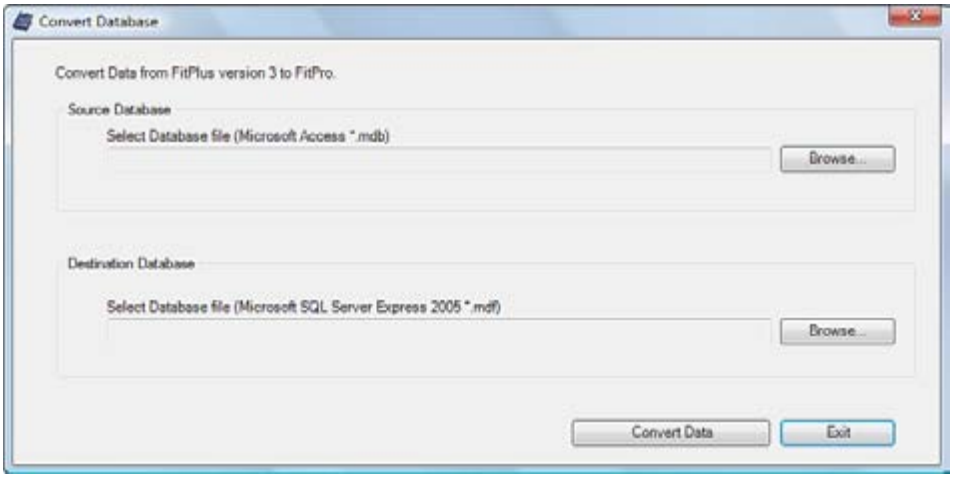


Figure 14. Convert Database Dialog

2. Click **Browse** to find and select the FitPlus v3 (.mdb) database you want to convert.
3. Browse for a directory path and provide a name for the new destination database.
4. After selecting a source and destination database file, click **Convert Data**. If there are no errors, the message "Database conversion complete" will be displayed.
5. Click **Exit** to end the conversion process.
6. The newly converted database **is not** automatically set as the active database. Go to **Database | Change Active** to select the new database file as the active database.

You can convert additional FitPlus v3 data into other new FITPRO databases by repeating this process from Step 1.

Note for FitPlus v3 users: When converting from FitPlus v2 to FitPlus v3, you had to "finalize" the database. This is not required with FITPRO™ software. However, if you want to collect data from several FitPlus v3 databases into a single database, convert each database to a temporary database file and then use the **Database | Utilities | Merge** function (see Chapter 5) to consolidate all the data in a single database. Then delete the temporary databases.

Chapter 4

FITPRO™ Menu Options

This chapter describes the menu options of the FITPRO™ software. The icons for the menu options that can be accessed from the toolbar are show next to the appropriate menu option.

The following table lists the menu options. You can select any of the options using the mouse or the keyboard.

- To select an item using the mouse, move the cursor to the menu and click the left mouse button. Then click the menu option you want to select.
- To select an item using the keyboard, press the Alt key and the underlined letter of the menu you want to select. For example, to select the **Database** menu, press Alt and then press **D**. To select a menu option, press the underlined letter for the option you want.

Menu	Options
File	• Report Print Settings • Card Print Settings • Exit
Database	• Flash Drive Database Exchange • Edit o People Table o Protocol Table o Respirator Table o Fit Test Table • Change Active • Copy • Export o Excel Format o Comma Separated Values (CSV) • Backup • Restore • Utilities o Split Database o Convert o Merge o Apply Custom Names o Move/Copy Data o Advanced Edit/Delete

Menu	Options
PortaCount	• Fit Test • Real Time • Daily Checks
Report	• Select Report • Single Fit Test
Setup	• Global Fit Test Options • Communication Ports
Help	• Help File Contents (this manual) • About FITPRO

File Menu

The **File** menu lets you perform certain print functions or exit the program.

Report Print Settings

Select this option to set up the printer and page properties. The first dialog allows you to set paper size, orientation, and margin sizes. Click **Printer** button to display the dialog that allows you to select the printer from a drop down list. The currently active printer is shown.

See Chapter 6 for details on creating and printing reports.

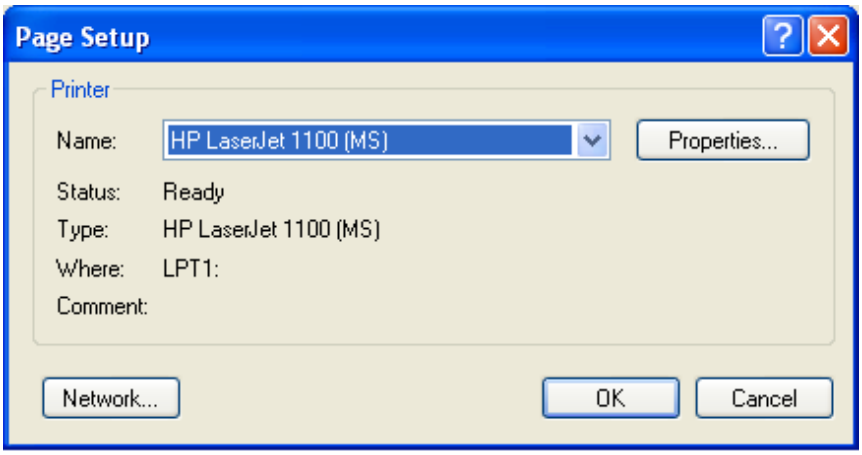


Figure 15. Printer Page Setup

Card Print Settings

Select this option to set up the card printer and card properties. The first dialog allows you to set card size, orientation, and margin sizes. Click **Printer** button to display the dialog that allows you to select the printer from a drop down list. See Appendix A for details on card printer settings.

Exit

Select this option to exit the FITPRO™ program and confirm that you wish to exit.

Database Menu

Refer to Chapter 5 for descriptions of these Database menu options.

PORTACOUNT® Menu

The PORTACOUNT® Menu lets you start fit testing, display real-time fit factors and real-time ambient concentrations, and set up and perform daily checks.

Fit Test

Select this option to begin fit testing. The **Select a Person: Fit Test Step 1 of 4** dialog box appears. Refer to Chapter 2 for a description of the procedure for running a fit test using FITPRO™ software.

Real-Time

Select this option to display real-time fit factors or real-time ambient concentration. The real-time fit factor display can assist in respirator training and troubleshooting. It is useful for helping a test subject experiment with strap tension and other adjustments while watching the effect their efforts have in real-time. The test subject learns how each adjustment affects the fit, and learns how to achieve a fit that is both comfortable and also has minimum leakage. The real-time ambient concentration display assists the tester in adjusting the ambient concentration to desired levels.

The real-time fit factor feature is intended for training. It should not be used immediately before a fit test. Using the feature to help the test subject don the respirator immediately before the official fit test defeats one of the main purposes of fit testing: *to prove that the test subject knows how to don the mask properly without help*. Use the Real-time Fit Factor feature for training and practice only.

Note: *You can use the real-time fit factor display just prior to a fit test as long as you have the test subject remove the mask and put it on again (without the use of the real time display or other assistance) before the final test.*

Before you start the real-time fit factor display, the PORTACOUNT® PRO fit tester must be on and properly attached to the computer. You should also have someone wearing a respirator that is properly attached to the PORTACOUNT® PRO fit tester.

1. To start the Real-Time Display, select **PortaCount** | **Real Time**. The FIT FACTOR radio button is selected by default. The Real Time Fit Factor Display appears (Figure 16).

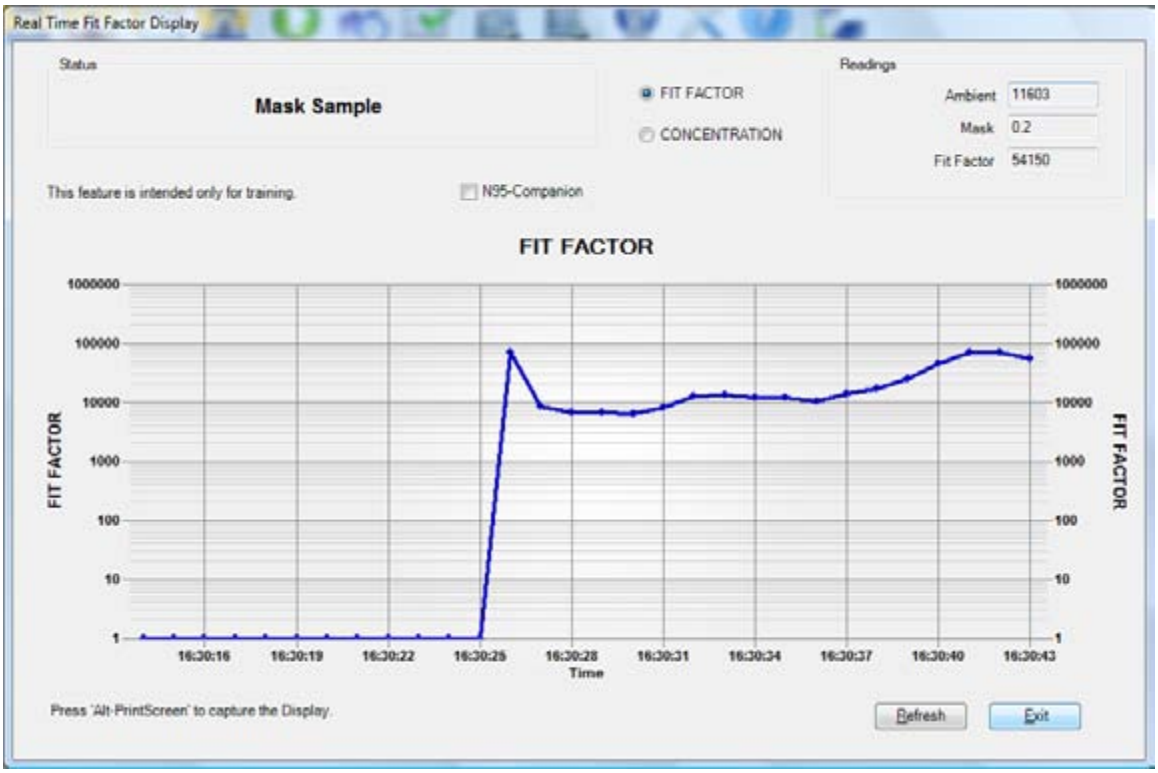


Figure 16. Real Time Fit Factor Display

FITPRO™ software begins by instructing the PORTACOUNT® PRO Respirator Fit Tester to take an ambient concentration reading and store the value. Then PORTACOUNT® PRO fit tester begins continuous monitoring of the mask concentration.

You can observe the Fit Factor reading fluctuate in near real time on the bar graph. (There is a 5- to 10-second delay between when a change in fit occurs and when the graph displays the change in fit factor.)

The graph pauses every 5 minutes while the PORTACOUNT® PRO fit tester takes a fresh ambient air measurement. Click **Refresh** to force a new ambient reading sooner.

2. Click the **CONCENTRATION** radio button to view real-time ambient concentration. In this mode, the PORTACOUNT® PRO fit tester continuously measures the particle concentration through the ambient inlet port allowing the user to easily check ambient concentration in preparation for testing.
3. Click **Exit** to close the Real Time Display.

Daily Checks

Select this option to perform daily checks of the PORTACOUNT® PRO Respirator Fit Tester.

Daily checks consist of a particle check, classifier check (this is an optional test available only for the PORTACOUNT® PRO+ 8038), zero check, and maximum fit factor check. There is also an

optional valve check. TSI strongly recommends performing daily checks once each day before you begin fit testing and anytime you suspect an instrument malfunction. If the instrument passes the daily checks it indicates the PORTACOUNT® PRO fit tester is in good working condition.

Daily check results are automatically stored in the active database (in the Daily Check Table). You can see a history of daily check results using the predefined Daily Checks Report, see Chapter 6.

Note: *The PORTACOUNT® PRO Respirator Fit Tester must be on and the warm-up period complete for the daily checks to proceed.*

To start Daily Checks:

1. Select **PortaCount | Daily Checks** or . The PORTACOUNT Daily Checks dialog box appears (Figure 17).

   Note*: The daily check process detects whether or not the N95 is part of the PORTACOUNT® PRO fit tester and adjusts the pass/fail values accordingly.*

2. Select **Enable Valve Check** if you want to include the valve check with the daily checks. The valve check is not part of the recommended daily checks. It is used to further diagnose why the maximum fit factor check may have failed. You must select this option before starting daily checks. Once daily checks begin, this option is disabled. Similarly, if you are using a PORTACOUNT® PRO+ 8038 and want to perform a classifier check, select the "N95" box. The classifier check is only necessary if you will be testing disposable masks with efficiency less than 99% (class 95, P2 and P1 respirators).

   Click **Settings** if you want to change or view the daily check settings.

Caution
Changing the Daily Checks settings is ***not*** recommended. Factory settings are optimal.

Note: *If you set the values outside the ranges indicated, the fit test will fail.*

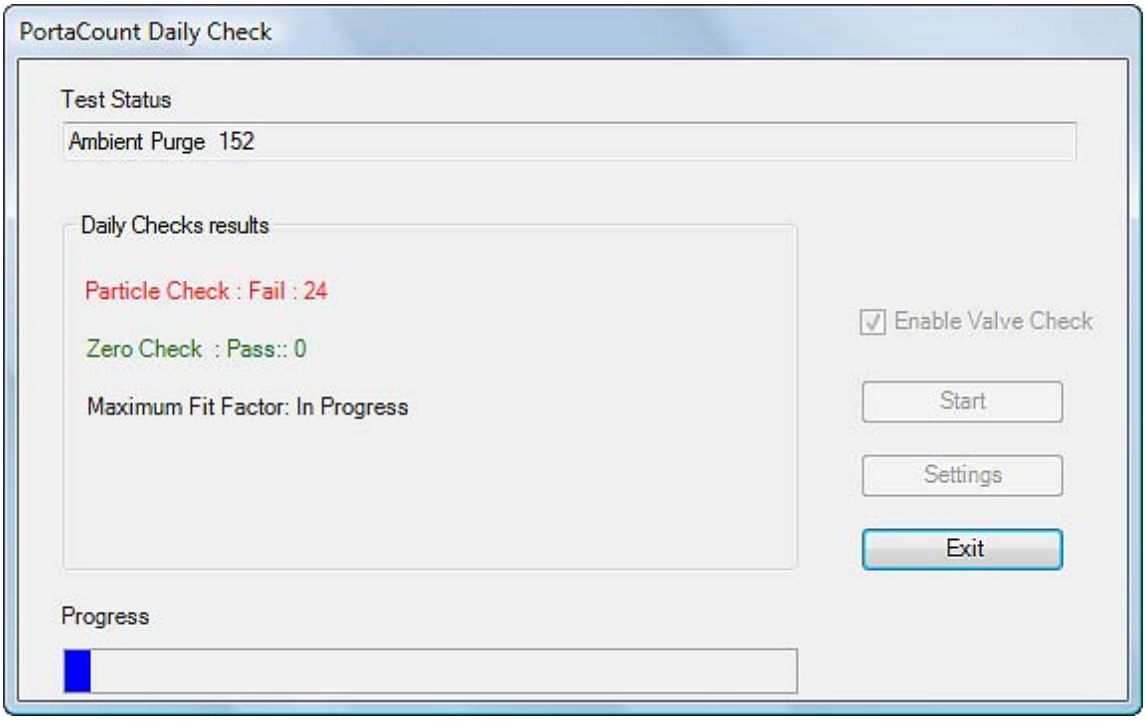


Figure 17. Daily Checks Dialog

3. The dialog box instructs you to remove the HEPA filter or mask from the PORTACOUNT® PRO sample hose and click **Start**. Once you click **Start**, the daily checks begin. The status of each test appears in the middle of the dialog box. Progress is displayed in a bar at the bottom of the dialog box. The particle check is performed first.
4. If you selected the "Use 95" box, the particle check is immediately followed by the classifier check. The classifier check verifies the classifier is functioning properly.
5. After the particle check is complete, you are instructed to attach the HEPA filter to the clear sample hose and click **Start** again. This initiates the zero check which automatically proceeds to the maximum fit factor check.
6. If you indicated the valve check should be conducted, the dialog prompts you to again remove the HEPA filter and press **Start**.
7. When all checks are complete, the test results appear in the dialog box and are stored in the Daily Check Table of the active database.
8. Click **Exit** to close the dialog box.

Note**: Refer to the PORTACOUNT® PRO Respirator Fit Tester Operation and Service Manual for technical information regarding the daily checks. The pass/fail settings used by FITPRO software for the daily checks can be viewed by selecting **PortaCount | Daily Check Settings.

Report Menu

The Report Menu lets you select reports to view/print or select a single Fit Test record to view or print.

Select Report

Select this option to view, modify or print predefined and user-defined reports. Refer to Chapter 6 for information regarding printing and viewing reports.

Single Fit Test

Select this option to view or print an individual fit test record. When you select this option the "Edit Fit Test Table" dialog appears. Refer to Chapter 5 for a definition of the fields and buttons available on this dialog.

Setup Menu

The options on the **Setup** menu let you change the Global FitPro Options and select the Communication Ports for your computer.

Global FitPro Options

Select this option to change how FITPRO™ software operates. Refer to Chapter 1 for information about setting Global FitPro Options.

Communication Ports

Select **Setup | Communication Ports** to verify the communication ports on which your PORTACOUNT® PRO fit tester is installed or to manually select the communication ports.

When you connect the PORTACOUNT® PRO fit tester to your computer and start FITPRO™ software, the software automatically searches the USB ports for the PORTACOUNT® PRO fit tester. If the PORTACOUNT® PRO fit tester is found, the port is automatically set.

***Note**: For the automatic search to succeed, the PORTACOUNT® PRO fit tester must be properly connected to the computer, turned on, and the warm-up period completed.*

If you need to manually select the communication port for the PORTACOUNT® PRO fit tester, proceed as follows:

1. Select **Setup | Communication Ports** or . The Select Address dialog box appears.
2. If you don't know which TCP/IP Address the instrument is attached to, click **Search.** The software searches for a PORTACOUNT® PRO fit tester.

   If you know the TCP/IP Address, choose it from the drop-down menu.

   Once the software connects with the PORTACOUNT® PRO fit tester, other information on the dialog is filled in.
3. If the firmware version of the instrument is lower than the version required to run with FITPRO™ software, you will see the required firmware version in red to the right of the actual version. In Figure 18 below, the required version of firmware is 1.2.9.

4. Click **Save** to save the setting, and then **Exit** to close the dialog box.

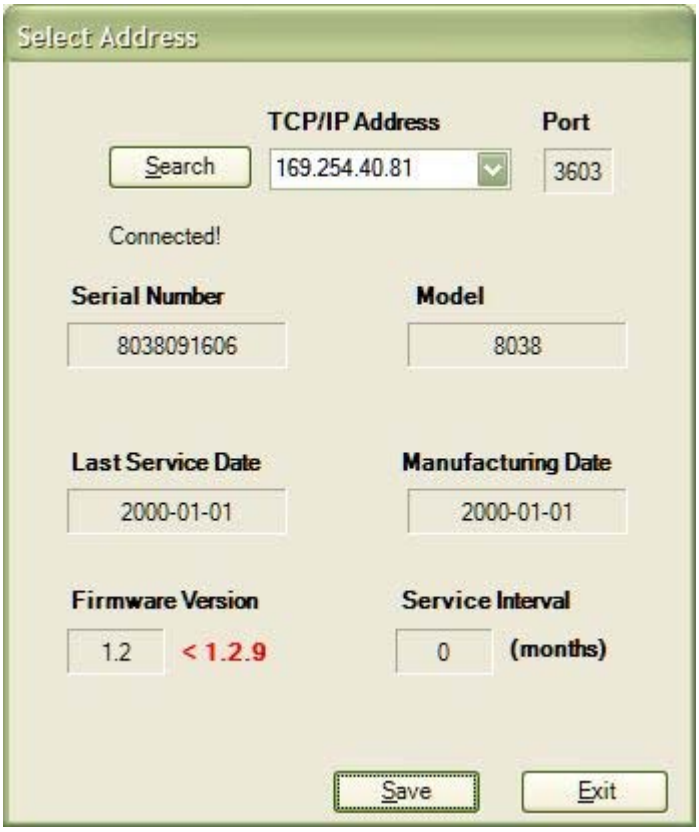


Figure 18. Select Address Dialog

Help Menu

The Help Menu options provide online access to this manual (in pdf format) and other information, including the software version number for your FITPRO™ software.

Help File Contents

Select the Help File Contents option to open a .pdf file of this manual. You must have Adobe® Acrobat® Reader (a free utility) to open a .pdf file. Connect to the Internet then click here to download a copy of Adobe® Acrobat® Reader.

About FITPRO™ Software

Select the About FITPRO option to display version information about the FITPRO™ software.

Chapter 5

Database Management and Operation

FITPRO™ software uses five database tables: People, Respirator, Protocol, Fit Test, and Daily. Each database table is used for specific data. Step 1 of a fit test uses the People Table, Step 2 uses the Respirator Table, Step 3 uses the Protocol Table, and the fit test results are stored in the Fit Test Table.

The **Database** menu options let you perform a variety of database management functions:

- Edit each table to change data.
- Change the active database currently in use.
- Create a new database.
- Copy a database to a specific location and filename.
- Export a database table to a Microsoft Excel® (*.XLS) file or a comma separated value (*.CSV) text file.
- Back up a database.
- Restore a database from a previous backup.
- Split the Fit Test and/or Daily Table based on the test dates.
- Convert database files from FitPlus™ to FITPRO™ software.
- Merge one database with another using selected criteria.
- Apply custom field names to existing People and Fit Test Tables.
- Move and copy individual records from one database to another.
- Advanced editing of most fields in the database.

All database files have an **.**mdf extension. The default database file supplied with FITPRO™ software is FitProData.mdf, which contains the People, Respirator, Protocol, Fit Test, and Daily tables. You can create new databases.

W A R N I N G
Each SQL server database is composed of a pair of connected files (.mdf and .ldf) which always need to be together, for example fitprodata.mdf and fitprodata_log.ldf. Renaming, overwriting, removing, or changing these files can lead to errors and loss of data when FITPRO™ software runs.

Database Menu

All of the options of the Database menu are described below.

Flash Drive Database Exchange

Select this option to transfer a database between a Flash Drive and FITPRO™ software. This function lets you export the FITPRO™ database to a flash drive, so you can take the PORTACOUNT® fit tester with the flash drive to the test site for fit testing. Once all fit testing is done, you can import the fit test data to the FITPRO™ database.

On the PORTACOUNT® PRO fit tester, data is stored on a flash drive in XML format. SQL Server exchanges data in XML format for increased reliability and ease of operation. The exchange function automatically converts data between .mdf (the SQL database format used by FITPRO™ software) and XML (the data format used by PORTACOUNT® PRO fit tester). You do not have to concern yourself with the conversion, but you must verify the data after it is converted.

The Database Exchange dialog (Figure 19) has two sections, one for exporting data and one for importing data. The fields and buttons for each portion of the dialog are described below.

Import

Field or Button	Description
Exit	Click to close this dialog.
Import Database from Flash Drive	After you have selected the Source XML file and a Destination Database, click this button to perform the operation.
Select Destination Database	Use **Browse** to select the database on the PC to which you want to import data from the Flash Drive.
Select Source XML file	Use **Browse** to select the XML file on your flash drive from which you want to import data from your PORTACOUNT® fit tester to your PC.

Export

Field or Button	Description
Select Source Database	Use **Browse** to select the database on the PC from which you want to export data to the Flash Drive.
Select Destination XML file	Use **Browse** to select the XML file on the Flash Drive to which you want to export data from your PC.
Export Database To Flash Drive	After you have selected a Source Database and a Destination XML file, click this button to perform the operation.

To Exchange a FITPRO™ Database File with a Flash Drive Database (Export)

1. Insert a flash drive in an available USB port on your PC.
2. Select **Database | Flash Drive Database Exchange** from the Database menu.

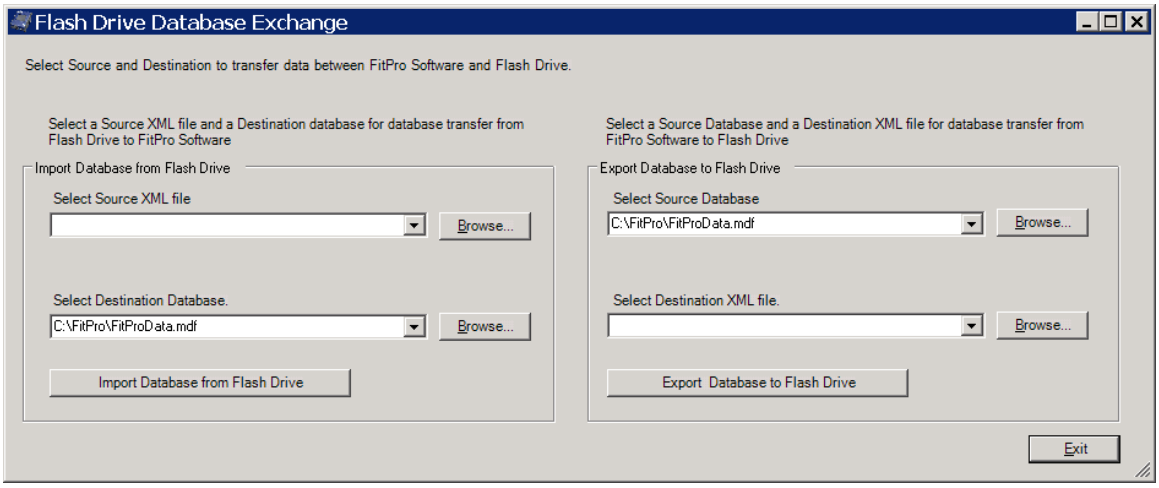

Flash Drive Database Exchange
Select Source and Destination to transfer data between FitPro Software and Flash Drive.
Select a Source XML file and a Destination database for database transfer from Flash Drive to FitPro Software
Import Database from Flash Drive
Select Source XML file
Browse...
Select Destination Database.
C:\FitPro\FitProData.mdf
Browse...
Import Database from Flash Drive
Select a Source Database and a Destination XML file for database transfer from FitPro Software to Flash Drive
Export Database to Flash Drive
Select Source Database
C:\FitPro\FitProData.mdf
Browse...
Select Destination XML file.
Browse...
Export Database to Flash Drive
Exit

Figure 19. Flash Drive Database Exchange Dialog

3. By default, FITPRO™ software selects the current active database as the source database. Click the down arrow or **Browse** to select another database. Exporting a database does not delete or modify the original database file in any way.
4. Use the down arrow or **Browse** to display the XML file on the Flash Drive you want to export data to in the **Select Destination XML file** field. (You may need to create a new filename.)
5. When the correct database file and XML file are displayed, click **Export Database to Flash Drive**. A message indicates success or failure.
6. Use file manager to verify the XML file has a current time stamp and some data.
7. Eject the flash drive from the computer and insert it in an available USB port on the PORTACOUNT® PRO fit tester.
8. Refer to the PORTACOUNT® PRO Respirator Fit Tester Operation and Service Manual for further information.

FITPRO™ software exports only people, respirator, and protocol data. You can add fit test and daily check data from the PORTACOUNT® PRO fit tester. If you create data for a new person, respirator, or protocol on the PORTACOUNT® fit tester, it can be imported back to the original database.

To Exchange a Flash Drive Database File with a FITPRO™ Database File (Import)

1. Remove the flash drive from the PORTACOUNT® PRO fit tester and insert it in an available USB port on your PC.
2. Select **Database | Flash Drive Database Exchange** from the Database menu.

3. Use the down arrow or **Browse** to display the name of the database (*xxx*.xml) on the Flash Drive you want to import to FITPRO™ software from the **Select Source XML file** field. (Generally, this is the same XML file you initially used to export to the Flash Drive, but you can select a different filename.) Importing a database does not delete or modify the Flash Drive database file in any way.

Caution
Importing data from Flash Drive to FITPRO™ software will modify the destination database by adding new records.

4. Use the down arrow or **Browse** to display the database file (.mdf file) on your PC that you want to import data to in the **Select Destination Database** field. (Generally, this is the same database file you initially used to export to the Flash Drive, but you can import the data to any database or create a new database filename.)
5. When the correct database file and XML files are displayed, click **Import Database from Flash Drive**. A message indicates success or failure.
6. Use file manager to verify the database file (.mdf file) has a current time stamp and some data, and then select **Database | Edit | People Table** and check the contents of the file.

FITPRO™ software imports people, respirator, and protocol data. It also imports any fit test and daily check data added when the file was used on the PORTACOUNT® PRO fit tester. If you created data for a new person, respirator, or protocol on the PORTACOUNT® fit tester, it is imported with the other data.

Edit

To edit (or view) any of the database tables, select **Database** | **Edit** and then **People, Respirator, Protocol,** or **Fit Test**. Each table is described below.

Edit or View the People Table

Select **Database** | **Edit** | **People** or to edit or view the People Table (Figure 20). The Edit People Table dialog box appears and displays the last record you accessed in this table.

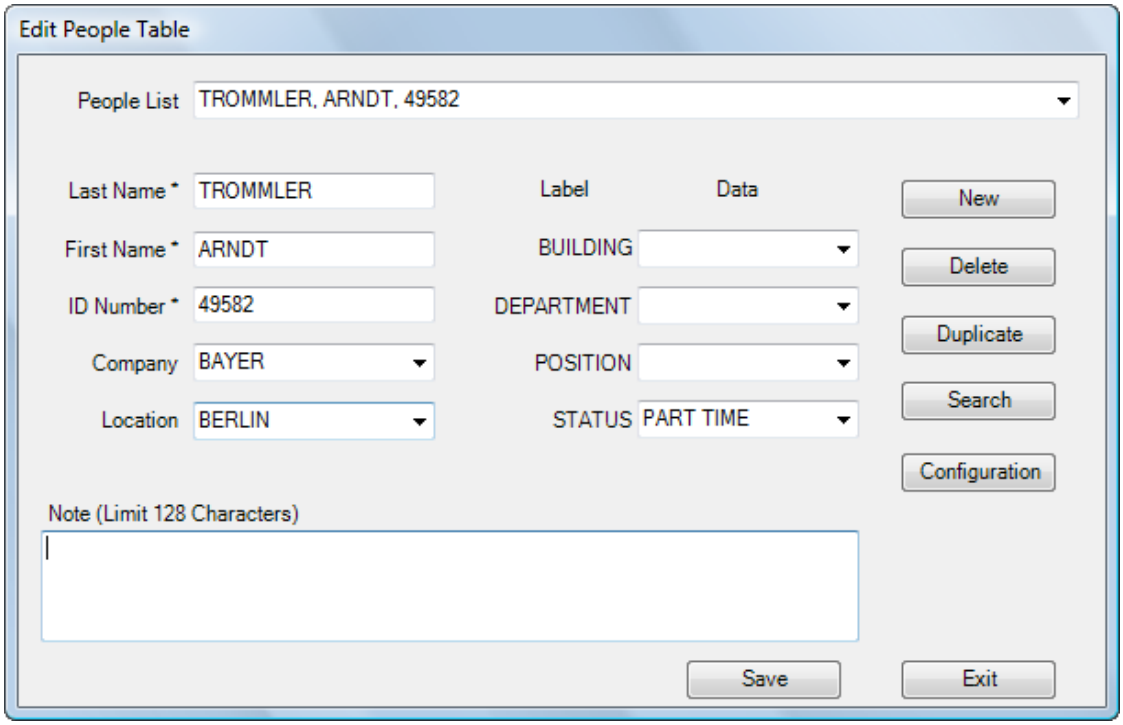


Figure 20. Edit People Table Dialog

Records in the People Table are sorted by last name, first name, and ID number.

If the table is empty, the dialog box contains all blank fields. You can enter information for a new record in the fields of the dialog box. You can also change any of the displayed information of existing record by overwriting these fields.

Click **Save** to update the record. If no changes have been made to the dialog, **Save** is not active.

To close this dialog, click **Exit**.

***Note**: The last name, first name, and ID number field cannot have a comma(,). If you enter a comma in these fields, a warning message is displayed and the comma is removed.*

The following table describes the Edit People Table dialog box.

Button or Field	Description
Company	The person's company name. Select the name using the down arrow or enter a value.
Configuration	See Setting User Configuration in Chapter 1.
Delete	Deletes the current record. A warning message first appears asking you to verify you want to delete the record. If you click **Yes**, the record is immediately and permanently deleted.
Duplicate	Creates a record with the same values in each field except Last Name, First Name and ID Number. Edit the fields as necessary and click **Save**.

Button or Field	Description
Exit	Closes the dialog box. If changes were made to the current data, you are given a chance to discard or accept the changes.
First Name	The person's first name. 25 character limit. Required field. Comma (,) not allowed.
ID Number	The person's ID number. 11 alpha-numeric character limit. Required field. Comma (,) not allowed.
Label/Data	These are user-defined fields from the **Configuration** dialog (see Setting User Configuration in Chapter 1.) Use the down arrow to select custom names like "department," "supervisor," "medical," "job," and so on.
Last Name	The person's last name. 25 character limit. Required field. Comma (,) not allowed.
Location	The person's location, such as "office," "lab1," etc. Select the location using the down arrow or enter a value.
New	Opens a blank record, so you can create a new record in the database.
Note	Information about the person that can affect the fit test circumstances or results, such as "wears safety goggles," or "wears dentures." 128 character limit.
People List	Selects a record for display. Click the arrow to the right of the name string field to display a list of all the records in the database file. The name string is composed of the last name, first name and id number, separated by commas. Each name string must be unique.
Save	Adds (or updates) the currently displayed information to the database.
Search	Displays the **Database Search** dialog box. To use this dialog, type the name you want to find in the **Text to search for…** box, the text is searched in the current selection of **Column name….** You can also select one record from the Result List. Once the desired record is found, click **Exit**. The Edit People Table dialog box reappears, and the selected record is displayed. If the record you are searching for is not in the database, the first record in the file reappears. Click **New** and add the new record.

Edit or View the Protocol Table

Select **Database** | **Edit** | **Protocol** to edit or view the Protocol Table. The Edit Protocol Table dialog (Figure 21) appears and displays the record for the last protocol you used.

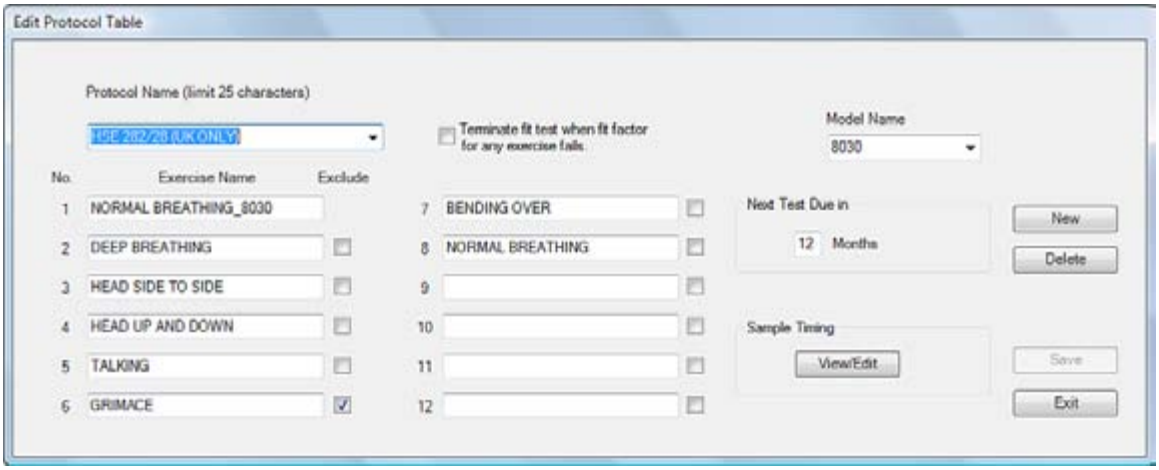


Figure 21. Edit Protocol Table Dialog

Records in the Protocol Table are listed in alphabetical order. Click the arrow to the right of the **Protocol Name** field to display the drop-down list of protocols so you can select one of them.

FITPRO™ software automatically installs protocols into each database when the database is created, so the fit test protocol you need to use is probably already available.

If you need to add a new protocol, click **New** and enter information for a new record in the fields of the dialog box. You can also change information for any existing record by editing these fields.

Each protocol must have a unique name. The protocol name field cannot have a comma(,). If you enter a comma in this field, a message is displayed and the comma is removed.

Click **Save** to update the record. If no changes have been made to the dialog, **Save** is not active.

To close this dialog, click **Exit**. FITPRO™ software asks if you want to change the default protocol to the one shown when you exit this dialog.

Note: *Each protocol is identified by a name and model number, for example OSHA has three entries in the database corresponding to the different mask/ambient time values for the 8030, 8038_N99, and 8038_N95.*

The following table describes each button or field in the Edit Protocol Table dialog box.

Button or Field Name	Description
Delete	Deletes the displayed record. A warning message first appears, asking you to verify the delete action. If you click **Yes**, the record is deleted permanently.

Button or Field Name	Description
Exercise Name	Lists all the exercises in the protocol (up to 12 exercises). 25 character limit. Required field. An empty field will cause errors.
Exclude	Check the box next to the Exercise Name if you want to exclude it when calculating the fit factor. This exercise then is essentially a "time-out." It is typically used for the OSHA 29CFR1910.134 grimace exercise. Do ***not*** exclude exercises unless you are absolutely certain they are not required for the overall fit factor result. ***Note:*** *When an exercise is excluded, the value stored as the mask sample time becomes the time used for the entire exercise. No actual measurement is made.*
Exit	Closes the dialog box. If a new record was added or field was changed, you are prompted to save or discard changes.
Model Name	Select the model of the PORTACOUNT® PRO fit tester being used: 8030, 8038_N99 or 8038_N95.
New	Opens a blank record so you can enter a new protocol record in the database.
Next Test Due In _ months	Number of months before the next fit test is due. This is typically 12 months, although some regulations call for 6 or 24 months. Consult the applicable regulations for additional information. Valid range from 1 to 99. Required field.
Protocol Name	The exercise protocol you are currently using. Click the arrow to the right of the **Protocol Name** field to display a list of all the protocol records in the database. Select a new record or leave the current record information in the dialog box.
Sample Timing	Select **View/Edit** to display the Sample Timing for PORTACOUNT® (alone) dialog box. This box sets the Mask Sample Times, Mask Purge Time, Ambient Sample Time, and Ambient Purge Time when you are conducting a fit test with the PORTACOUNT® PRO fit tester alone. See the table below.
Save	Saves the current information. If a new record was added, the record is added to the database.
Terminate Fit Test when Fit Factor for any exercise fails	If the protocol requires *all* exercises to pass, check this box. Most regulations allow an exercise to fail as long as the overall fit factor passes. Default is unchecked. To enable Overall Fir Factor check flag, refer to Global FITPRO™ software options.

The following table describes each button or field in the Exercises (Sample Timing…) dialog box Figure 22).

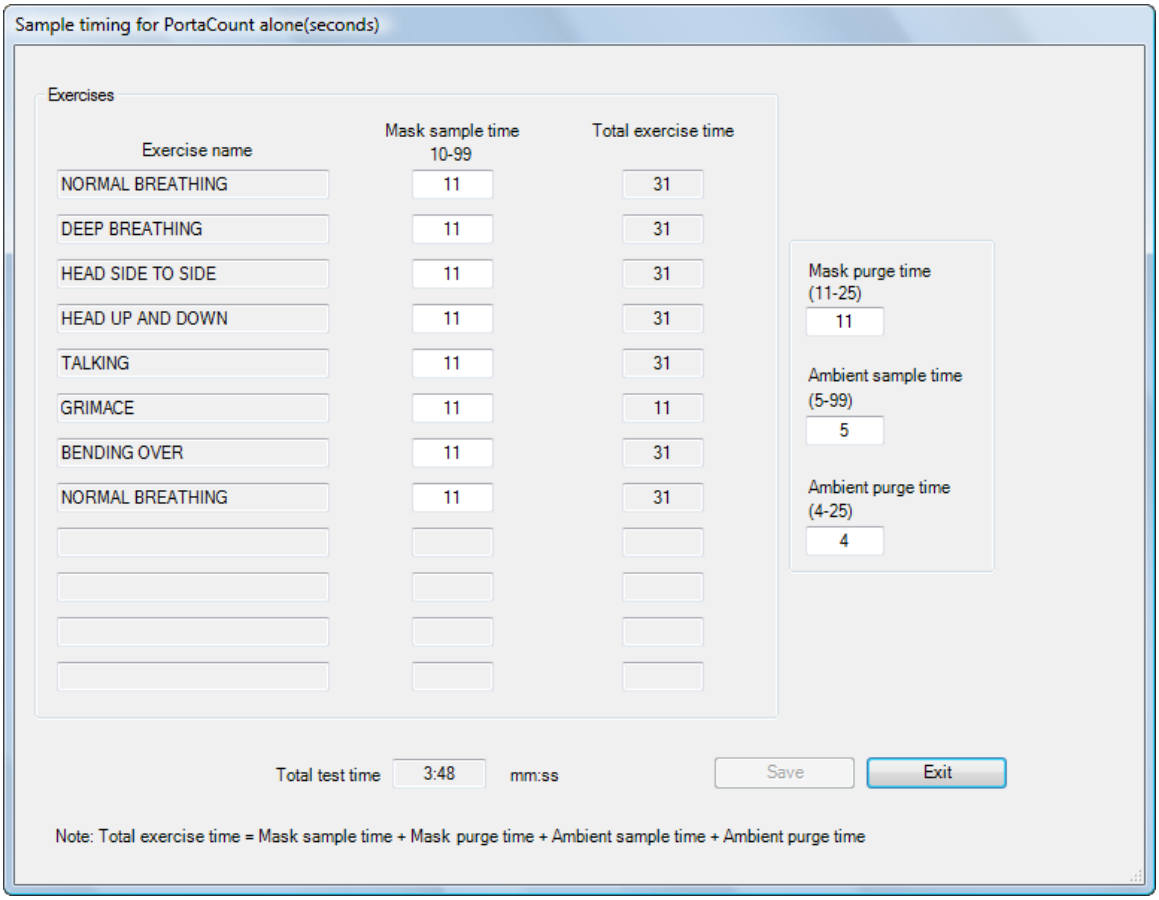

Sample timing for PortaCount alone(seconds)
Exercises
Exercise name
Mask sample time 10-99
Total exercise time
NORMAL BREATHING 11 31
DEEP BREATHING 11 31
HEAD SIDE TO SIDE 11 31
HEAD UP AND DOWN 11 31
TALKING 11 31
GRIMACE 11 11
BENDING OVER 11 31
NORMAL BREATHING 11 31
Mask purge time (11-25) 11
Ambient sample time (5-99) 5
Ambient purge time (4-25) 4
Total test time 3:48 mm:ss
Save
Exit
Note: Total exercise time = Mask sample time + Mask purge time + Ambient sample time + Ambient purge time

Figure 22. Sample Timing Dialog

Field Name	Description
Ambient Purge Time	The time (in seconds) the ambient air is purged before an ambient sample measurement is made.
Ambient Sample Time	The time (in seconds) the ambient air is sampled before the Mask purge time begins.
Exercise Name	The name of the exercise. This field cannot be edited. It is pulled from the Protocol Table dialog.
Mask Purge Time	The time (in seconds) the mask is purged before the Mask sample time.
Mask Sample Time	The time (in seconds) that the Mask samples air for the specific exercise.
Total Exercise Time	Total time (in seconds) for each exercise. The total time is the sum of: mask time + ambient purge + ambient sample + mask purge times. FITPRO™ software automatically updates the total as you enter numbers in a field. You cannot update this field.
Total Test Time	The cumulative time for all exercises (in minutes; seconds). You cannot update this field.

Edit or View the Respirator Table

Select **Database** | **Edit** | **Respirator** to edit or view the Respirator Table. The Edit Respirator Table dialog (Figure 23) appears and displays the record for the last respirator you used.

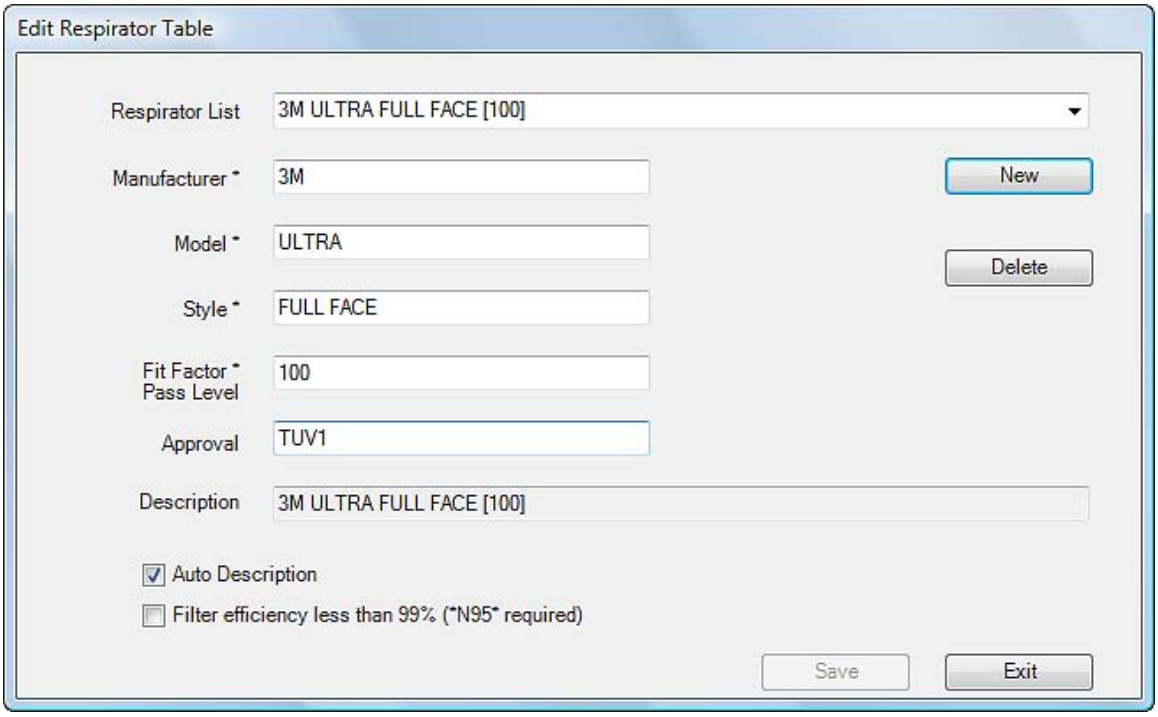


Figure 23. Edit Respirator Table Dialog

Records in the Respirator Table in listed in alphabetical order. Use the **Respirator List** field to display and select any respirator record.

If the database is empty, all fields are blank. Click **New** and enter information for a new respirator in the various fields of the dialog box. You can also change the displayed information for any existing record by overwriting the appropriate fields.

Click **Save** to update the record. If no changes have been made to the dialog, **Save** is not active.

To close this dialog, click **Exit**.

Note: *The Manufacturer, Model, Style, and Fit Factor Pass Level are required fields for all records and cannot have a comma(,). If you enter a comma in this field, a warning message is displayed and the comma is removed.*

The following table describes each of the buttons or fields in the Edit Respirator Table dialog box.

Button or Field	Description
Approval	Displays the respirator approval (certification) number.
Auto Description	If checked, the description field is automatically filled in using the information from the manufacturer, model, style and fit factor pass level fields. You may overwrite the automatic description if necessary. This box is checked by default.
Delete	Deletes the displayed record. A warning message first appears, asking you to verify you want to delete the record. If you click **Yes**, the record is permanently deleted.
Description	Respirator description, also shown in the **Respirator List** field. See **Auto Description** above. 60 character limit. Comma(,)not allowed.
Exit	Closes the dialog box.
Filter Efficiency Less than 99% (*N95* required)	Check this box if you are fit testing respirators that have filter efficiency below 99%. You must use the PORTACOUNT® PRO fit tester with an N95 (Model 8038). Examples of filter types with efficiency below 99% include: N95, R95, P95, P2, P1, Dust-mist, Dust-mist-fume, etc. Leave this box unchecked if the respirator is equipped with particulate filters having 99% or greater efficiency. Examples of filters with high efficiency include P100, R100, N100, P99, R99, N99, P3, HEPA etc.
Fit Factor Pass Level	Fit factor pass level number for this respirator, such as 100 for half masks and 500 for full-face masks. Consult the applicable regulations you intend to comply with for the correct value to use. Required field.
Manufacturer	The respirator manufacturer's name. 25 character limit. Required field. Comma (,) not allowed.
Model	Respirator model. 25 character limit. Required field. Comma (,) not allowed.
New	Opens a new record so you can enter a new record in the database.
Respirator List	Click the arrow to the right of the **Respirator List** field to display a list of all the respirator records in the database. You can select a new record or leave the current record in the dialog box.
Save	Updates the current data in the database.
Style	Description of the respirator style, such as "half-face" or "full-face." 25 character limit. Required field. Comma (,) not allowed.

Edit or View the Fit Test Table

Select **Database** | **Edit** | **Fit Test** to edit or view the Edit Fit Test Table. The Edit Fit Test Table dialog (Figure 24) appears and displays the first record in the Fit Test Table. Records are sorted alphabetically by last name, first name, ID number, test date, respirator description and test time. The fields are read only; you cannot change them. However, you can delete an entire record.

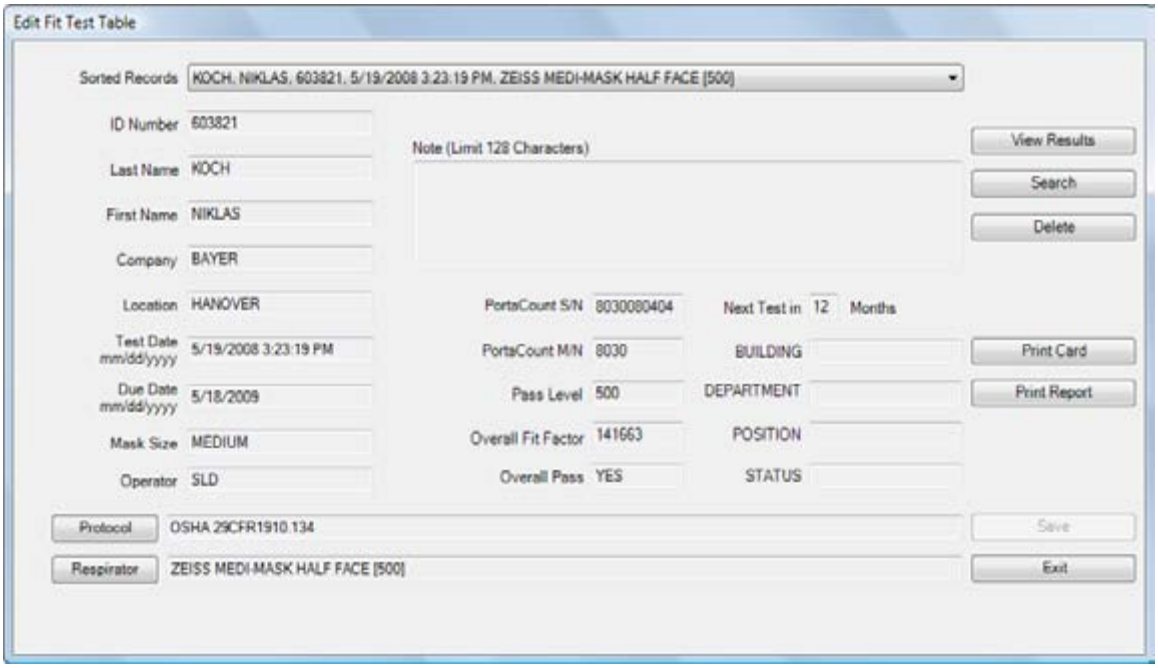


Figure 24. Edit Fit Test Table Dialog

Select a new record by clicking the arrow next to the **Sorted Records** field. You can also click **Search** and use the resulting dialog box to search for a specific fit test record.

The following table describes each button and field in the Edit Fit Test Table dialog.

Button or Field	Description
Company	Company name of the fit test subject.
Delete	Deletes the current data from the database.
Due Date	Date the next fit test is due.
Exit	Closes the Edit Fit Test Table dialog box. If any entries were modified, you are asked whether to save or discard changes.
First Name	First name of the fit test subject.
ID Number	ID number of the fit test subject.
Last Name	Last name of the fit test subject.
Location	Location of the fit test subject.
Mask Size	Size of the mask used for the fit test.
Note	Information about the person that can affect the fit test circumstances or results.
Operator	Name of the operator who conducted the fit test.
Overall Fit Factor	Overall fit factor result for the fit test.
Overall Pass	YES for a passed fit test; NO for a failed fit test.
Pass Level	Pass level used for the fit test.
PortaCount M/N	Model number of the PORTACOUNT® PRO used for the fit test.

Button or Field	Description
Print Card	Prints a fit test card with the current record information. A special card printer must be installed for this feature to work. To adjust page margins for Fit Test Cards go to **File | Card Print Settings**.
Print Report	Prints the Fit Test report to your designated printer. To adjust the page margins for Fit Test Reports go to **File | Report Print Settings**.
Protocol	Displays the fit test protocol used for this fit test. Click to view detailed exercise timing information. Protocol information is historical and cannot be modified.
Respirator	Displays the respirator used for this fit test. Click to view detailed information on the respirator used for this fit test. Respirator information is historical and cannot be modified.
Save	Saves any changes made to the current record. This button is active only if a change has been made to the currently displayed data.
Search	Displays the **Database Search** dialog box. Type the information to search for in **Text to search for…** box. The corresponding fit test record is highlighted. If the search fails to find a matching record, the currently highlighted record remains highlighted.
Sorted Records	Click the arrow to the right of the **Sorted Records** field to display all the Fit Test records in the database. Select a new record or leave the current record information in the dialog box.
Test Date	Date of the fit test.
User-Defined (custom) fields	User-defined data that is stored in the people table for this person.
View results	Displays the detailed exercise results for this fit test. Information is historical and cannot be modified.

Change Active

Select **Database** | **Change Active** to change or view the active database you are using for fit tests. The Change Active Database dialog appears.

Please refer to Chapter 1 for a description of this dialog.

Copy…

This option lets you copy a database (and selected data) from one location to another:

1. Select **Database** | **Copy.** The Make a Copy of a Database dialog (Figure 25) appears.

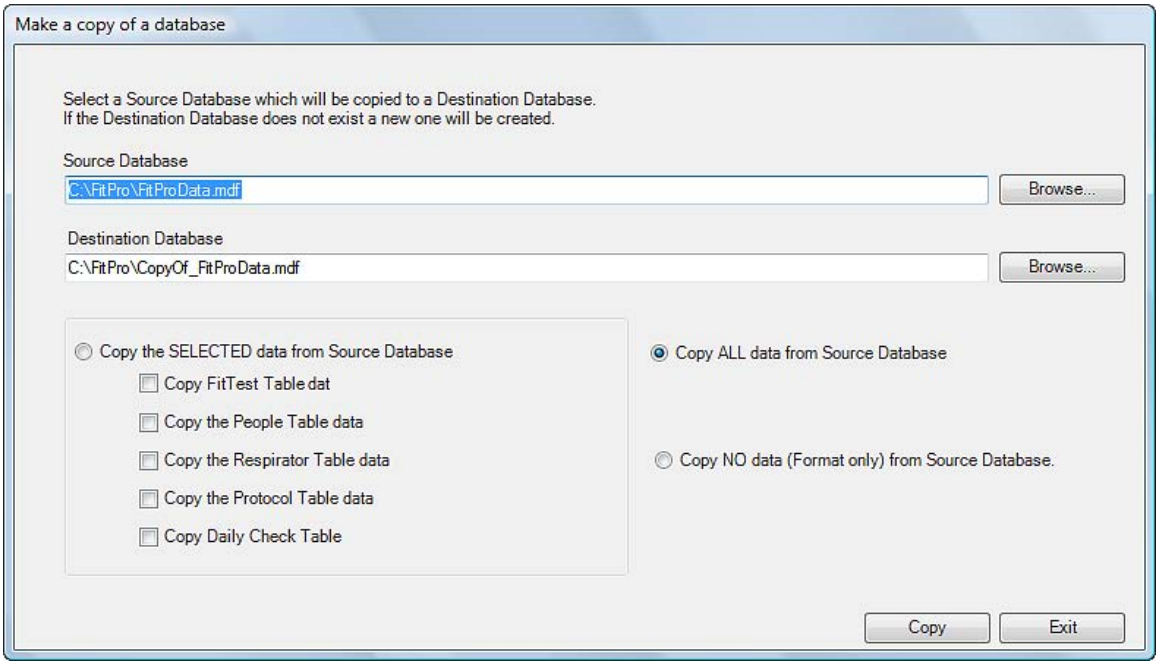

Make a copy of a database
Select a Source Database which will be copied to a Destination Database.
If the Destination Database does not exist a new one will be created.
Source Database
C:\FitPro\FitProData.mdf
Browse...
Destination Database
C:\FitPro\CopyOf_FitProData.mdf
Browse...
Copy the SELECTED data from Source Database
Copy FitTest Table dat
Copy the People Table data
Copy the Respirator Table data
Copy the Protocol Table data
Copy Daily Check Table
Copy ALL data from Source Database
Copy NO data (Format only) from Source Database.
Copy
Exit

Figure 25. Make a Copy of a Database Dialog

2. By default, the active database is listed as the source database. If you want to copy from a different database, click **Browse** and navigate to the desired database file.

3. By default, the destination database name is "COPYOF_ *source database name.*" You can change the name of the destination database by typing over the destination name or use **Browse** to choose a different database. If the destination file exists, a warning is displayed giving you a choice to overwrite the existing file or select a different one. If the destination file does not exist, it is created.

4. Select one of the three options for the copy function:

   - Copy *selected* data from source database.
     This option lets you select the various tables to be copied.
   - Copy *all* data from source database.
     This option makes an identical copy of the database.
   - Copy *no* data from source database.
     This option copies the database structure only. You can merge tables from other databases into it afterwards.

   Note: *If the destination database already exists, all data in all tables of that database will be erased before the copy. Whether the destination database is newly created or pre-existing, the default protocols will be placed in the Protocol table unless* ***Copy ALL*** *or* ***Copy the Protocol Table*** *is selected.*

5. After you select the information you want to copy, and the source and destination databases, click Copy to execute the function. The data is copied from the source to the destination and a message indicates success or failure.

Export

Most popular database and spreadsheet software cannot read Microsoft® SQL Server® format databases directly, but you can export data in Microsoft® Excel® (*.xls) format or Comma Separated Value (*.csv) format.

To export (transfer) data to programs that cannot read Microsoft SQL format, select **Database** | **Export** and either **Excel Format** or **Comma Separated Values (DSV)**.

Export Data in Excel Format

To export a table in Microsoft Excel format:

1. Select **Database** | **Export** | **Excel Format**. The Export Data in Excel® format (*.xls) dialog (Figure 26) appears. By default, the active database is selected as the **Source** database. If you want to export from a different database, click **Browse** to navigate to the desired database file.

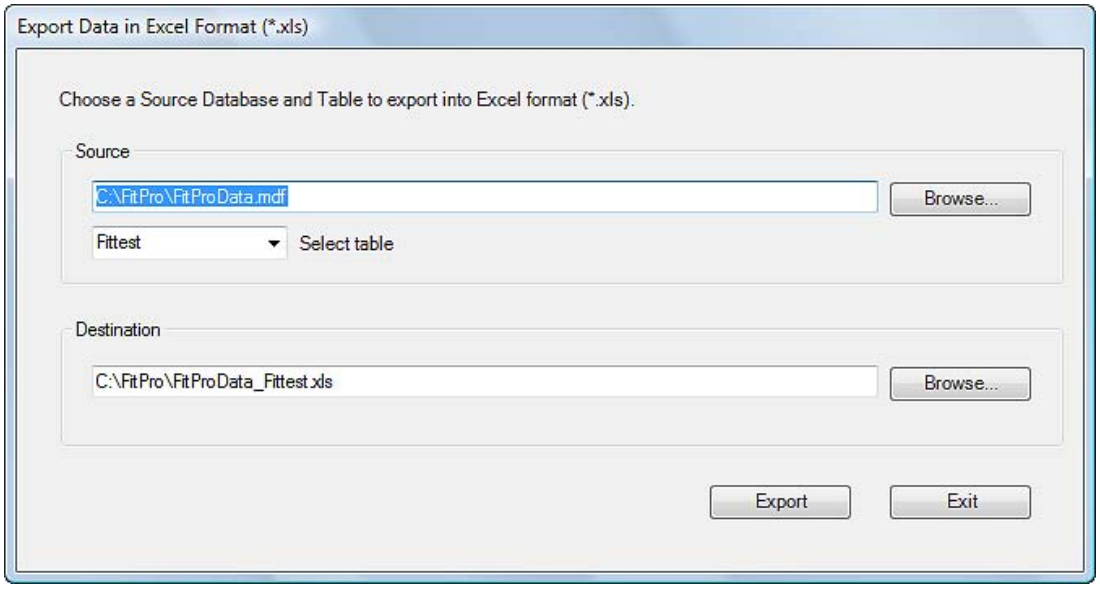


Figure 26. Export Data in Excel Format

The export database function creates a Microsoft Excel format file (*.xls) that contains *all* data in the selected table. You cannot filter records.

2. Use **Select Table** to select the table you want to export data from. The Fit Test Table is selected by default. You can only export one table at a time.
3. By default, the **destination** filename is the source database name with table name and an .xls extension. To select a different file click **Browse** and find or create a new filename. (The file extension **.xls** is entered for you.)

W A R N I N G
If you select the name of an existing file, the file will be overwritten.

4. Click **Export** to execute this function. The data is copied from the source to the destination Excel file and a message appears verifying the operation.

Export Data in Comma Separated Value Format

To export a table in CSV format:

1. Select **Database** | **Export** | **Comma Separated Value (CSV).** The Export Data into Comma Separate Value (*.CSV) format dialog (Figure 27) appears.

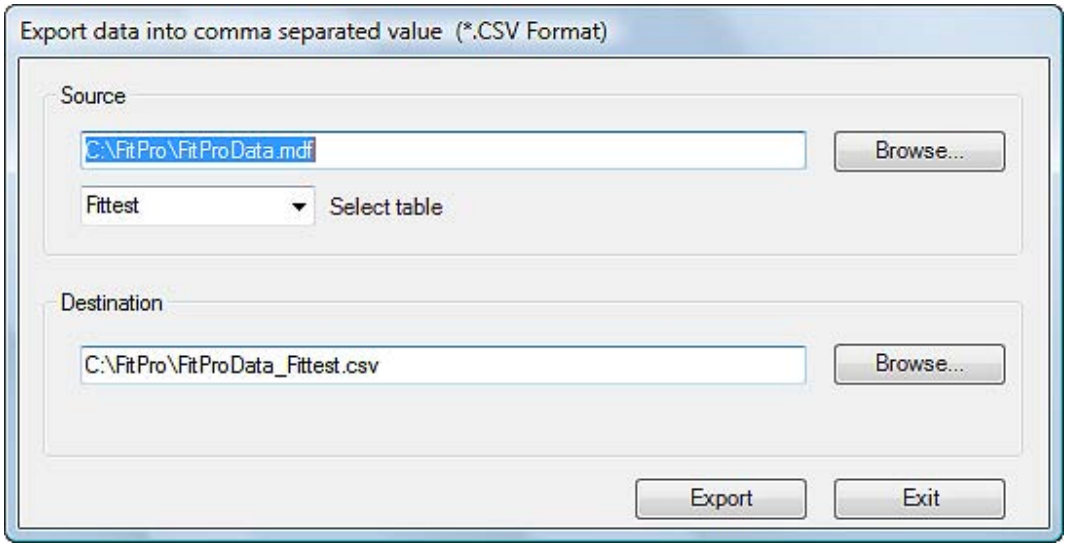


Figure 27. Export Data in CSV Format

By default, the active database is selected as the **Source** database. If you want to export from a different database, click **Browse** to navigate to the desired database file.

The export database function creates a Comma Separated Value format file (*.csv) that contains *all* data in the selected table. You cannot filter records. A CSV file is an ASCII text file with each record from the table on one line. Each data item is enclosed in quotation marks (“) and delimited with a comma (,).

2. Use **Select Table** to select which table you want to export data from. By default, the Fit Test Table is selected. You can only export one table at a time.
3. By default, the **Destination** filename is the source database name with table name and a .csv extension. To select a different file, click **Browse** and find or create a new filename. (The file extension **.csv** is entered for you.)
4. Click **Export** to execute this function. The data is copied from the source file to the destination .csv file and a message appears verifying the operation.

Backup

The Backup function lets you backup (save) a copy of a database. This is useful in case the current database gets corrupted or is deleted by mistake. Be sure to store the backup copy in a different location than the original database. Use removable media, such as a flash drive or CD-ROM, or store the backup on a network drive.

To backup a database:

1. Select **Database** | **Backup**. The backup dialog (Figure 28) appears.

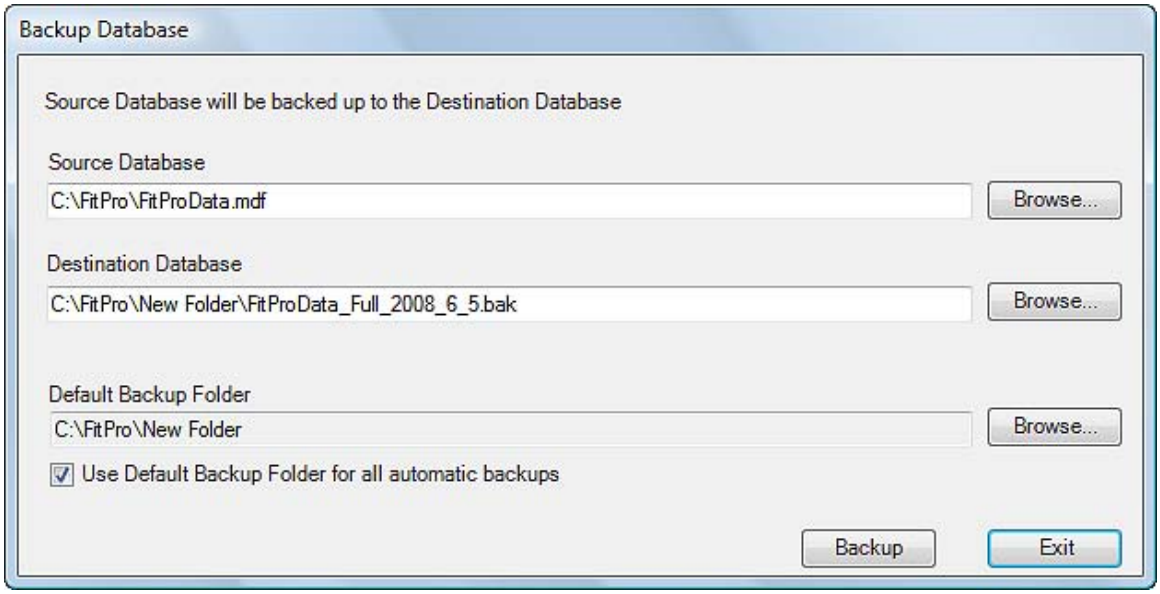


Figure 28. Backup Database Dialog

2. By default, the active database is selected as the **Source Database**. If you want to back up a different database, click **Browse** to navigate to the desired database file.
3. By default the **Destination Database** is saved to the same location as the source database and uses the same database name with a date code and a .bak extension. For example, the source database is named "FitProData.mdf" then the backup name is "FitProData_Full_2008_6_1.bak" (a full backup on June 1, 2008).
4. Click **Backup** to complete the operation. A message confirms the backup is complete.
5. FITPRO™ software performs automatic backups periodically (when you exit the program and after every 10th fit test is completed). If you want to save these backup files to a specific folder, use **Browse** to navigate to that folder and check the box for **Use Default Backup Folder for all automatic backups**.

Restore

The Restore function lets you replace a corrupt or deleted database with a previously saved backup copy.

To restore a database:

1. Select **Database** | **Restore**. The restore database dialog (Figure 29) appears.

2. Use **Browse** to select a **Source File** (.bak).
3. Click **Restore** to complete the operation. A message appears verifying the operation.

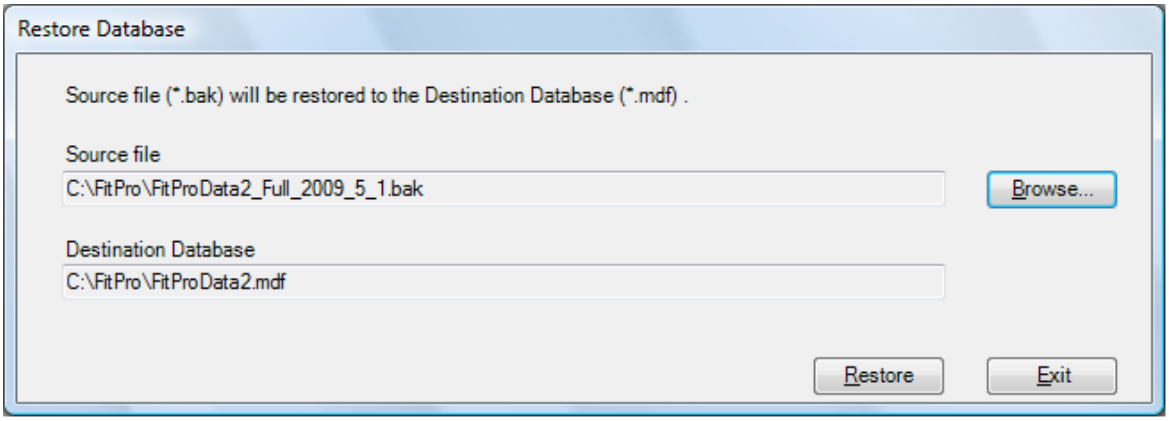


Figure 29. Restore Database Dialog

Notes: *The restored database contains data only up to the time that the backup database was created. Any data stored to the source database after the backup was made is permanently lost.*

If you are using a database located on a server (see Appendix B) and need to restore a database from ..\\FitProDatabase, you will need to log onto the server and then restore the database using the version of FITPRO™ software installed on that drive.

Utilities

The Utilities section of the Database menu lets you work with existing databases and perform operations such as splitting databases, converting them from FitPlus v3 to FITPRO™ software, merging databases, applying custom names, moving or copying data, and advanced editing of a database.

Split Database…

Select Split Database to split a database by date. This is useful when a database gets too large or its records need to be separated by date. If FITPRO™ software performs database functions slowly and you know you have a lot of data spanning several years, it is a good indication the database is too large and should be split.

Before splitting the database, make sure you create and safely store a backup copy of it in case something goes wrong. (Use removable media like a flash drive, or CD-ROM or store the backup on a network drive.)

Note: *Only the Fit Test and Daily Tables can be split using this function. If the destination database exists, all data in all tables of that database will be erased before the split occurs. If the Fit Test Table is not checked no data from that table will be copied. Likewise, if the Daily Table is not checked, no data from that table will be copied. If either or both are checked, only the data with test dates on or after the selected date will be copied. All data from the other tables (People, Respirator, Custom, and Protocol) will be copied.*

To split a database:

1. Select **Database** | **Utilities** | **Split Database**. The Split Database by Date dialog (Figure 30) appears.

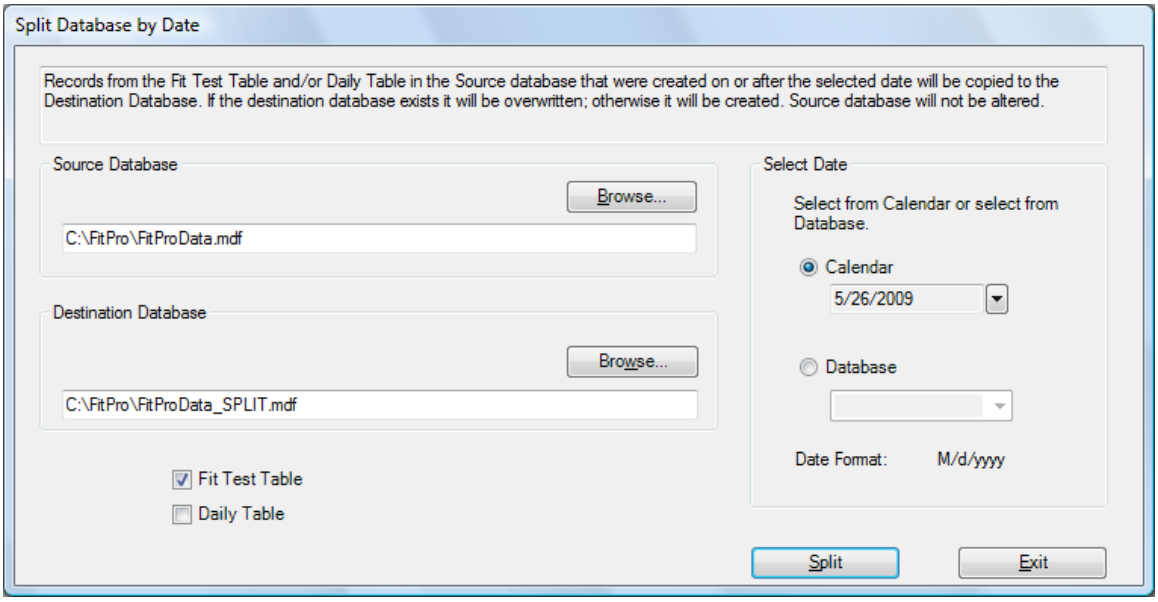

Split Database by Date
Records from the Fit Test Table and/or Daily Table in the Source database that were created on or after the selected date will be copied to the Destination Database. If the destination database exists it will be overwritten; otherwise it will be created. Source database will not be altered.
Source Database
Browse...
C:\FitPro\FitProData.mdf
Destination Database
Browse...
C:\FitPro\FitProData_SPLIT.mdf
Fit Test Table
Daily Table
Select Date
Select from Calendar or select from Database.
Calendar
5/26/2009
Database
Date Format: M/d/yyyy
Split
Exit

Figure 30. Split Database by Date Dialog

2. By default, the active database is selected as the **Source Database**. If you want to split a different database, click **Browse** to find the database you want to split.
3. By default the Source database is selected as the **Destination Database** and "_SPLIT" is appended to the name. To save the split database to a different folder, use **Browse**. If the database you select already exists, data in it is overwritten by this function. If the destination database does not exist, a new one is created.
4. Specify the date at which you want to separate the records. All records with test dates equal to or greater than the selected date are copied to the destination database.

   There are two methods of selecting the date.

   a) Select by Calendar date. Type the date in the specified format displayed in the Calendar field of the **Select Date** section or select the date from a calendar by clicking the down arrow to display the calendar. Then use using the arrow buttons at the top of the calendar to select the desired month, and click the date so the selected date is displayed under **Calendar**.

   b) Split the database based on Database values when the test was performed. Click **Database** in the **Select Date** section and then click the down arrow. A list of the test dates in the database appears. (If multiple records have the same test date, the date is shown only once.) Select the desired date to display it in the **Database** bar.
5. When the table(s) have been selected and the source database, destination database, and date selection choices have been made, click **Split**. A message appears verifying the operation.

Convert Database

Select Convert Database to convert a database from FitPlus v3 for use with FITPRO™ software. Before converting the database, make sure you store a backup copy of the source database in case something goes wrong. Use removable media like a flash drive, or CD-ROM or store the backup on a network drive.

To convert a database, refer to the information provided in Chapter 3.

Merge

Select Merge Database to merge (move) *tables* from one database to another. Merge does not alter the source database file unless the checkbox for "Delete records in Source Database after copy" is checked.

To merge data from one database file into another:

1. Select **Database** | **Utilities** | **Merge**. The Merge Database dialog (Figure 31) appears.
2. By default, the active database name is displayed as the **Source Database**. If you want to merge a different database, click **Browse** and navigate to the database you do want to merge data from.
3. Use the down arrow to select from the list box the name of the table you want to merge. You can merge any of the data tables (Fit Test, People, Protocol, Daily, or Respirator), but only one table can be merged at a time. By default, the Fit Test table is selected.
4. Click **Browse** to select the database you want to merge data *into*. The file must already exist or you cannot execute the merge function.

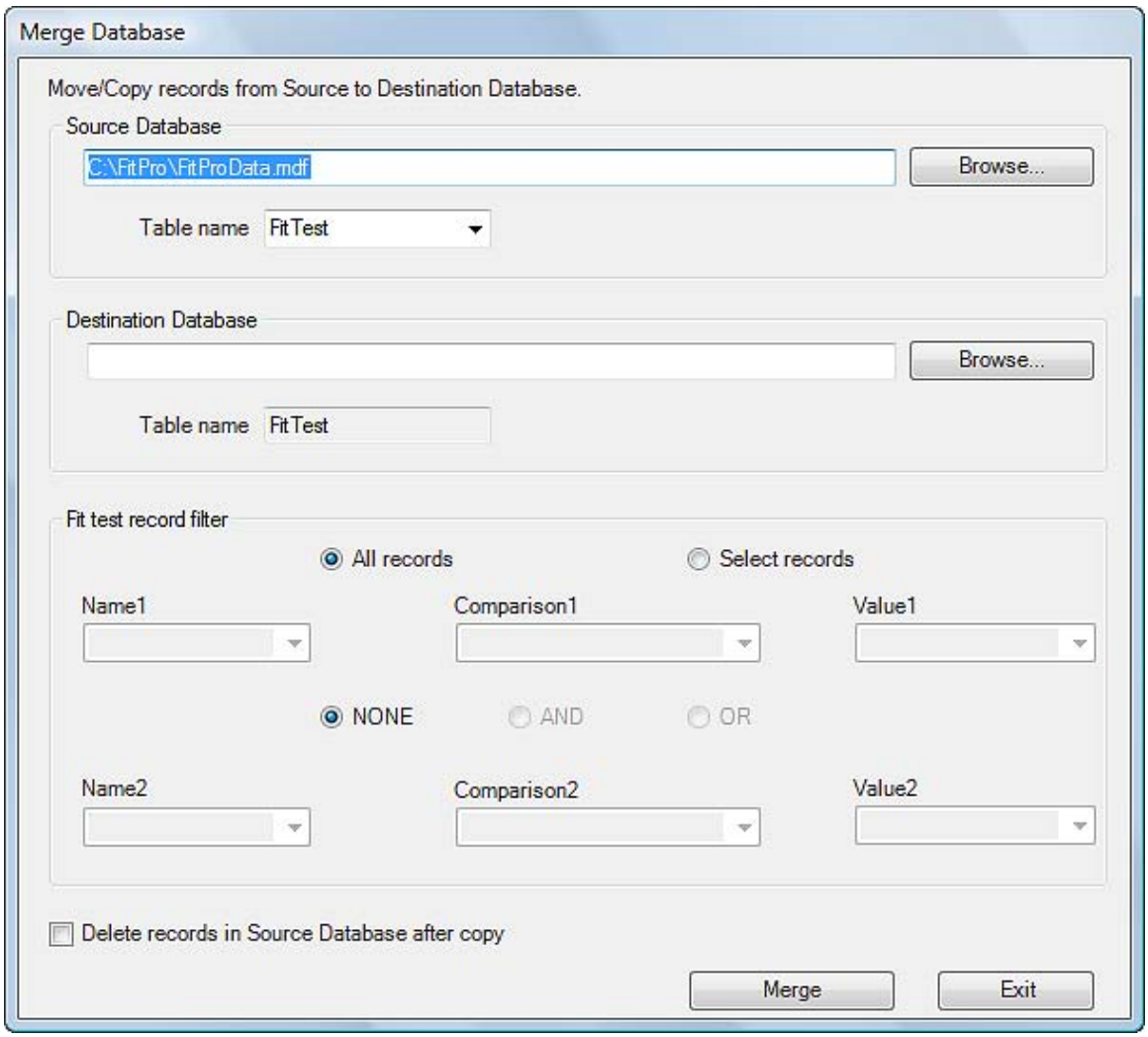


Figure 31. Merge Database Dialog

5. The **Fit test record filter** section of this dialog lets you select various criteria to merge. By default all records of the selected table are merged. *You can merge selected records of the Fit Test Table, but not other tables.* If merging records from the People, Protocol, or Respirator Tables, proceed to step 6.

   a) To merge selected records, click **Selected records** in the **Fit test record filter** section. This activates the criteria fields. Two criteria are available. These criteria can be combined in three different ways. **NONE** indicates that criteria2 is not selected and is inactive. **AND** indicates that the records selected must meet criteria1 and criteria2. If a record meets only one of the criteria, it will not be selected. **OR** indicates that the selected records can meet criteria1 or criteria2.

   b) Each criterion has three fields that can be selected: *name*, *comparison*, and *value*. **Name1** and **Name2** are fixed with TESTDATE as the only choice. **Comparison1** and **Comparison2** have five choices: EQUAL TO, GREATER THAN, GREATER THAN OR EQUAL TO, LESS THAN, and LESS THAN OR EQUAL TO. **Value1** and **Value2** contain test dates from the source database. You can select any of these values.

Example: If you want to select records between two dates (*date1* and *date2*), select **Comparison1** to be GREATER THAN and **Value1** to be *date1*. Select the **AND** radio button. Then choose LESS THAN for **Comparison2** and *date2* for **Value2**. Records from the source database that have test dates between (but not including) the two dates are selected. If you want to include records from *date1* and *date2*, select GREATER THAN OR EQUAL TO for **Comparison1** and LESS THAN OR EQUAL TO for **Comparison2**.

6. Select **Delete records in Source Database after copy** if you want the records to be *moved* from the source to the destination database. Leaving this checkbox unchecked means the selected records are *copied* from the source to the destination database.
7. When you have made the necessary choices, click **Merge**. The data is copied (or moved) from the source database to the destination database. A success or failure message is displayed.

Apply Custom Names

The following procedure describes how to *retroactively* apply FITPRO™ custom names to People or Fit Test Table records. See Set the Global Fit Test Options in Chapter 1 for details on how to define custom field names before proceeding with the steps below.

***Note**: Changing the custom field names for existing records cannot be undone, although it can be repeated. If you are not sure that the custom field data in the existing records was consistently entered, you may be better off leaving the custom names unchanged. This is especially true of the Fit Test Table. Changing the custom names in existing People Table records makes more sense since those names are used for future fit tests.*

To change custom names on *existing* records:

1. Select **Database | Utilities | Apply Custom Names**. The Apply Names to Custom Fields dialog appears (Figure 32).

   By default, the **Source Database** is the active database to which the custom names will be applied. If this is not the database you want to use, click **Browse** and navigate to the database you want to use.

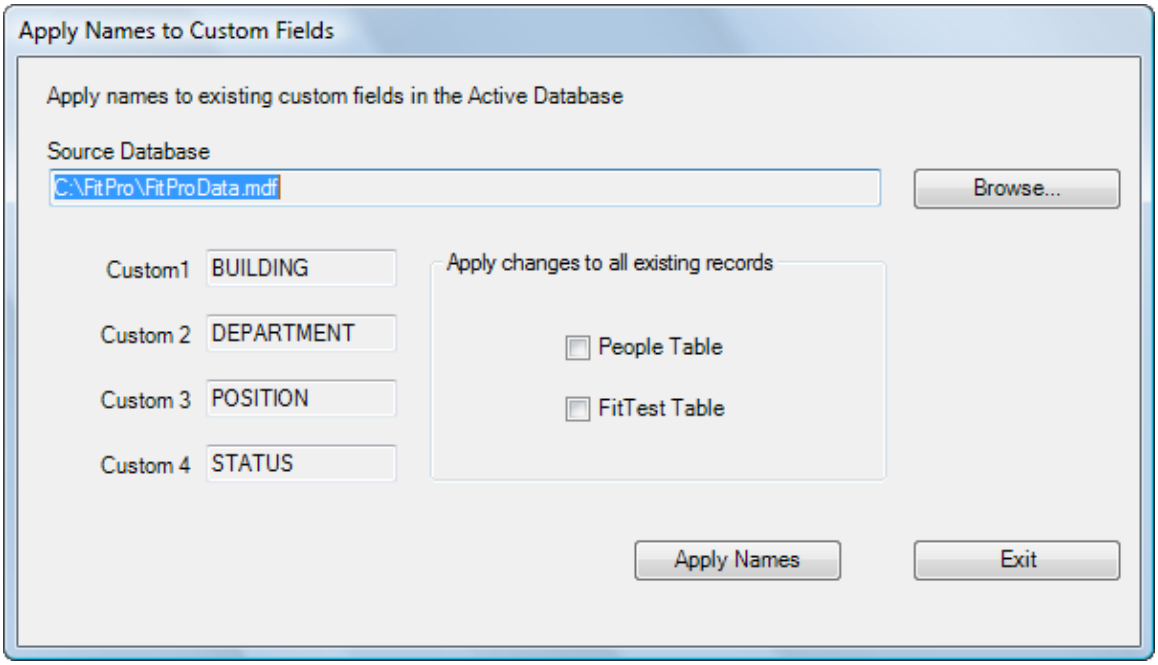


Figure 32. Apply Names to Custom Fields Dialog

2. The "**Apply Changes to All Existing Records**" section has a choice of People Table and Fit Test Table. Select the records you want changed.

   If you select only the People Table, *all* existing records in the People Table get the new custom names. If you select only the Fit Test Table, *all* the existing records in the Fit Test Table get the new custom names. If you select both the People and Fit Test Table, *all* existing People Table and Fit Test Table records get the new custom names.

3. The Custom1, Custom2, Custom3 and Custom4 fields display the current custom names. These fields are read only. If the custom names need to be changed, click **Exit** and select **Setup** | **Global Fit Test Options** and then click **Configuration**. Change the custom names and return to this dialog to apply names to custom fields.

4. Click **Apply Names** to apply the custom names.

5. Verify that the selected database contains the modified custom names by examining a record in the database using the **Database** | **Edit** menu.

Move/Copy Data

Select Move/Copy Data to move or copy *records* from one database to another. (Merge performs a similar operation, but *merges all the records of the specified table*.)

Note: *Only the Fit Test and People table records can be moved or copied using this function. Use the Merge function to copy or move records from other tables.*

To move or copy records:

1. Select **Database** | **Utilities** | **Move/Copy Data**. The move/copy dialog appears (Figure 33).

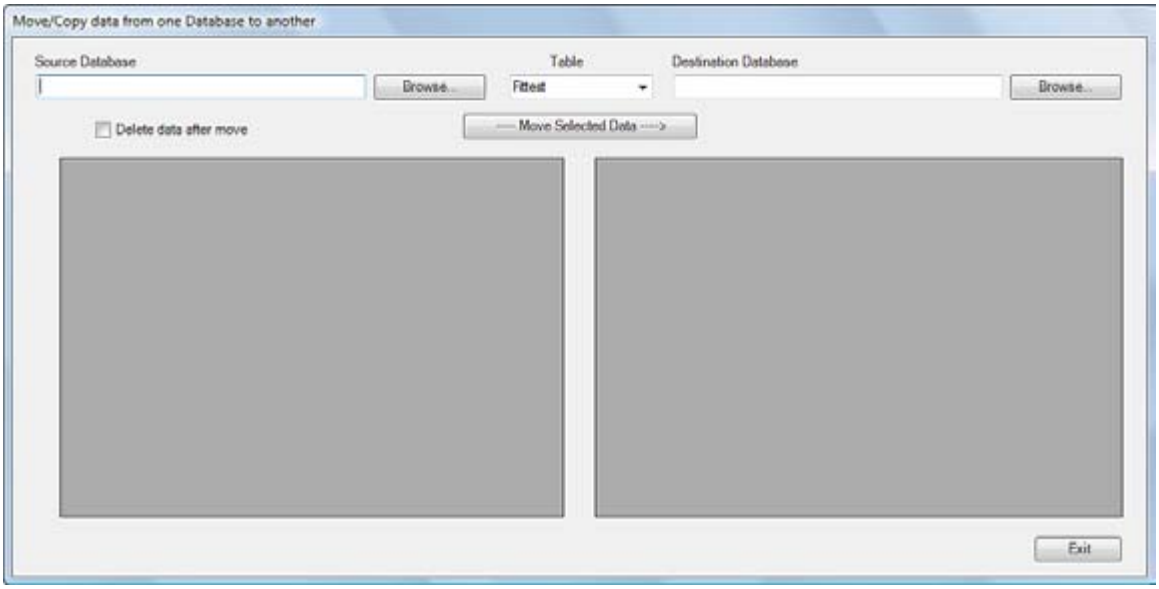


Figure 33. Move/Copy Data from one Database to Another Dialog

2. Use **Browse** to select the **Source Database** from which the records will be taken. The records in the database are displayed in the left hand window.
3. Use **Browse** to select the **Destination Database** to which the records will be copied or moved. The records in the database are shown in the right hand window.
4. If you want to *move* data, make sure the **Delete data after move** checkbox is checked. If you want to *copy* data, make sure that box is unchecked.
5. Select a record or records from the source database and then click **Move Selected Data**. The selected record or records are moved or copied to the destination database. You can transfer one record at a time. Or you select a number of individual records by holding down the Ctrl key and selecting individual records before clicking **Move Selected Data**. Or you can select a range of records by selecting the first record, then holding down the Shift key and selecting the last record, and then clicking **Move Selected Data**.
6. Continue selecting and moving as many records as you need. You can check or uncheck the **Delete data after move** checkbox at any time. And you can select a different table (Fit Test or People) at any time.
7. Click **Exit** to end the operation.

Advanced Edit/Delete

The Advanced Edit/Delete function lets you modify a record, add new records, and delete records.

W A R N I N G
The **Advance Edit/Delete** function does not provide any data validation or undo function. Any changes you make are immediately made in the database. This function can corrupt or damage your database if you enter characters that are not allowed in that field or if you alter the format (for date and time fields). It is intended for advanced users only.

To edit/delete a database record:

1. Select **Database** | **Utilities** | **Advanced Edit/Delete**. The Select a Database dialog appears. This dialog lets you select the Source file and table name of the database to be edited. By default the active database and Fit Test Table are selected.
2. Click the down arrow next to **Table names** to select a different table. Click **Browse** to select a different Source Database.
3. Click **Open** when the correct database and table are selected. The Advanced Edit Records dialog (Figure 34) appears. (The name of the selected database is shown in the title bar.)

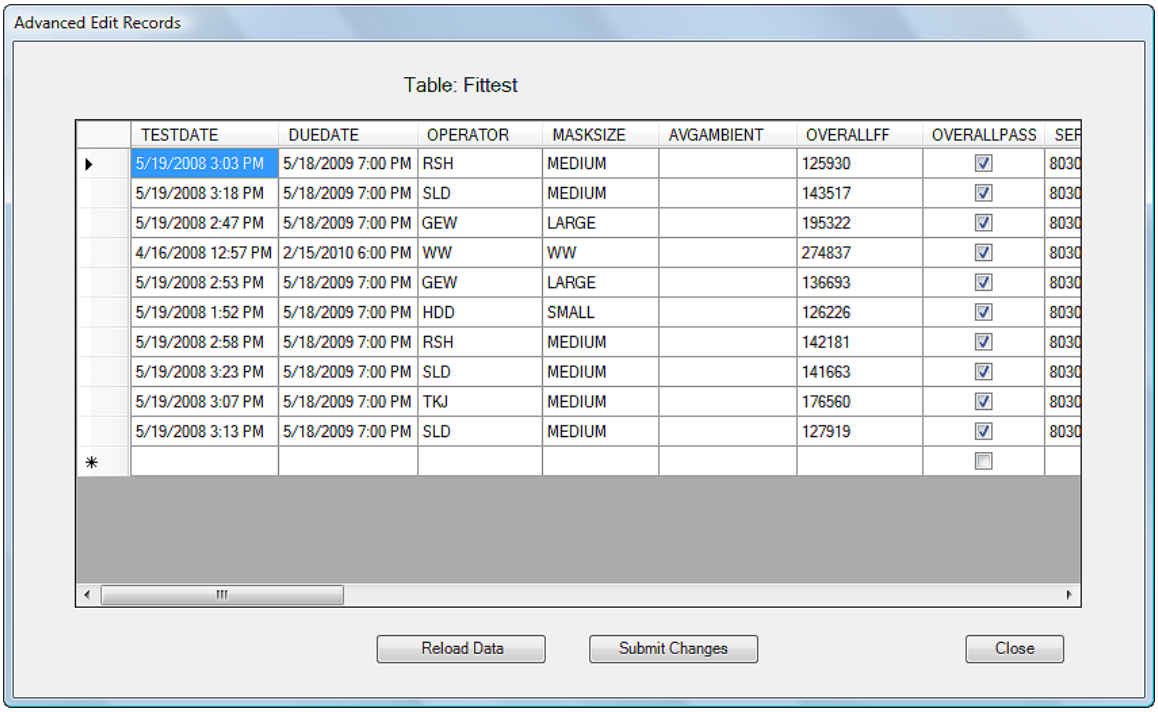


Figure 34. Advanced Edit Records Dialog

4. You can change data, add a new record, or delete a record. These changes are not saved to the database until you click the **Submit Changes** button.
    - To add a new record, click in the empty row at the bottom of the current list of records and type in the values you want to use.
    - To edit a record value, double-click on any cell to edit the contents of that cell.
    - To delete a record, highlight that row by clicking in the far-left unnamed column next to the row. The entire row will be highlighted. Click the **Delete** key on your keyboard.
    - To refresh the data displayed, click **Reload Data** This forces the application to close and reopen the selected database. If the database size is very large, this operation takes some time. If you click this button before clicking **Submit Changes,** the changes you made will be lost.
    - Click **Submit Changes** button to save all the changes you made to the database. No message is displayed. The background flashes green.
5. Click the **Close** button to close the current window.

W A R N I N G
Illegal entries may corrupt or damage the database. Be careful not to alter date and time formats. Also, it is recommended that you enter only uppercase characters.

Chapter 6

Create, Modify, and Print Reports

The report function lets you view data in a report (tabular) format. FITPRO™ software provides eight pre-defined reports and the option of creating many custom reports.

The pre-defined reports are:

- People Report
- Respirator Report
- Next Due Report
- Past Due Report
- Daily Checks Report
- Fit Test Report
- Fit Test Card
- Multi-Respirator Fit Test Card

The pre-defined reports are the most commonly used. They can be modified to some extent to accommodate user criteria.

The custom reports let you select a unique report name, select the database table, fields that should appear in the report, data selection criteria, fields to sort data, and the order of fields in report.

To access the reports function:

1. Select **Report** | **Select Report** or click . The Report Selection dialog (Figure 35) appears. The name of the database file used for the reports is shown at the top of the dialog box and in the **Report Details** window. By default, this is the active database. Click **Select Database** to choose another database. The reports that are available are shown in the **Report List** window. Click on a report name in this list and the number of records for that report is shown in the **Report Details** window.

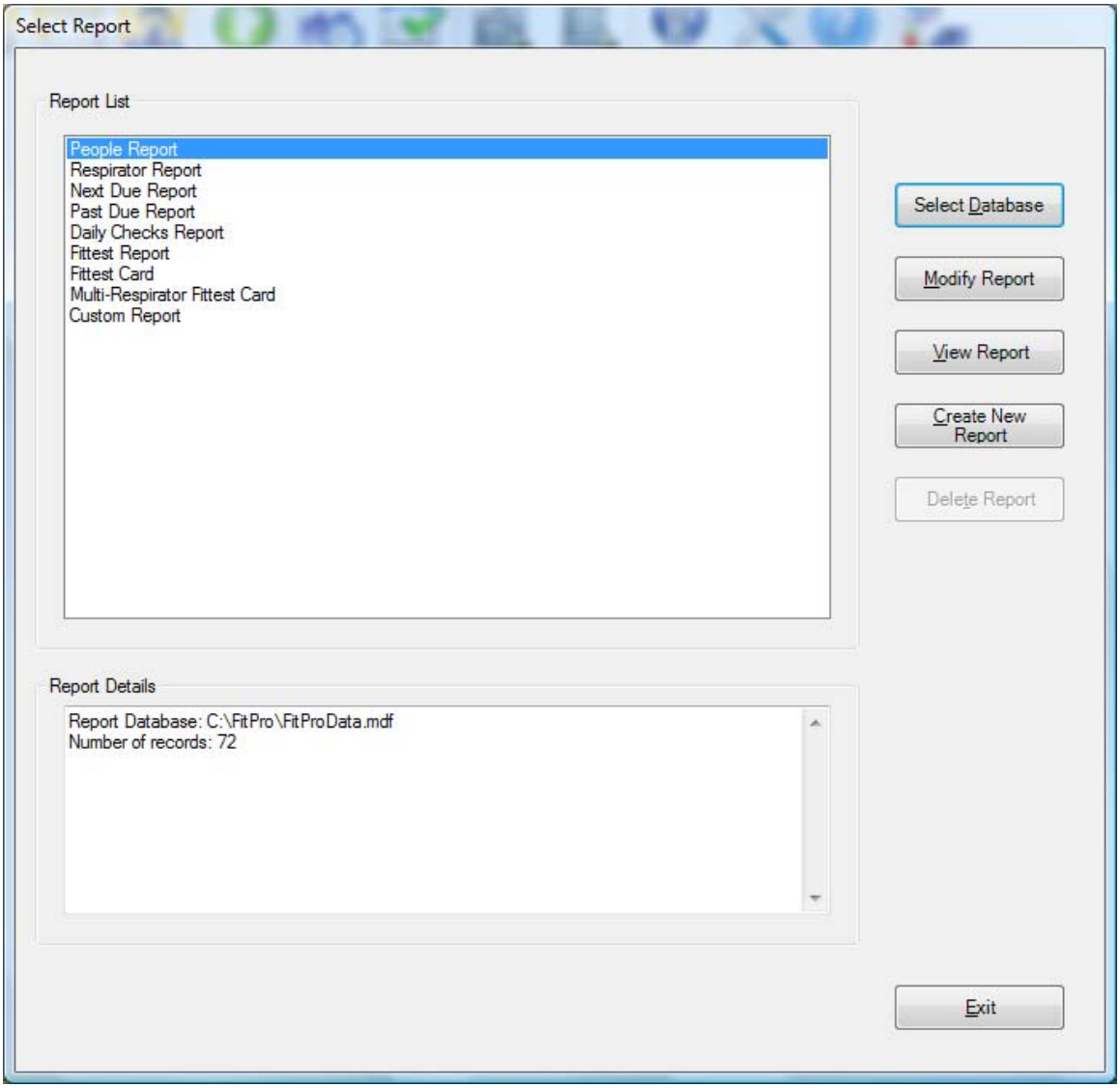


Figure 35. Select Report Dialog

The following table describes the fields and buttons in the Report Selection dialog.

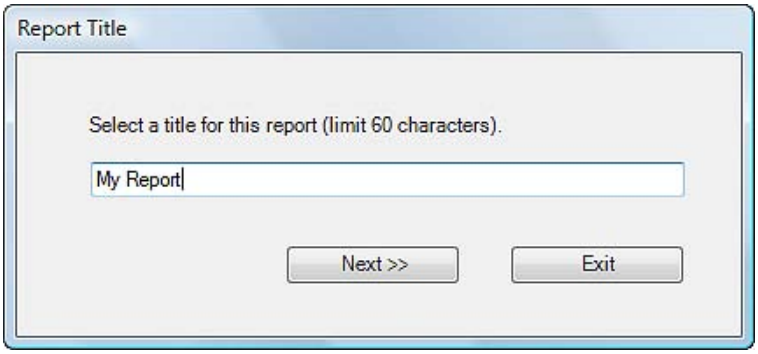
Button or Field Name	Description
Create New Report	Create a custom report using the Report Wizard (see below). The wizard lets you select the type of data and its presentation in the report.
Delete Report	Active only when you have selected a custom report. Click it to remove all information about the report. The pre-defined reports cannot be deleted.
Exit	Closes the Report Selection dialog.

Button or Field Name	Description
Modify Report	Displays dialogs that let you modify the report highlighted in the Report List window. You can change the filter used to select records and the sorting order of the records.
Report List	The names of the pre-defined and custom reports (if there are any).
Report Details	Shows the path, filename, and number of records contained in the report highlighted in the Report List window. The number of records changes depending on the database file and report selected.
Select Database	Opens a dialog box that lets you choose another database for report purposes. ***Note:*** *Selecting another database in this dialog box does not change the active database used for fit testing.*
View Report	Displays the report. In the case of fit test reports and fit test cards, displays the first report in the set. Click → to view the next report in the set. Click **Exit** to return to the Report Selection dialog.

The Report Wizard

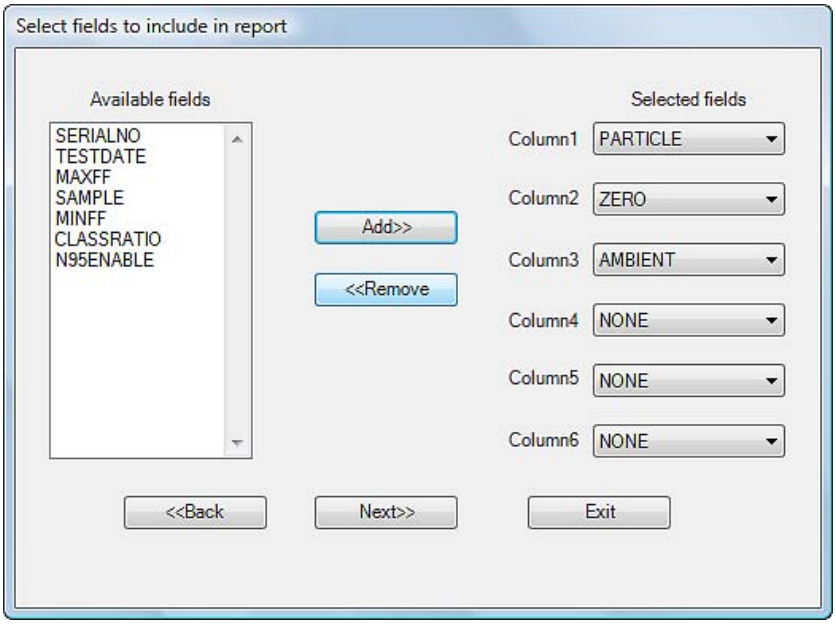
The Report Wizard guides you through modification of pre-defined reports and the creation or modification of custom reports. If you are modifying a report, skip to step 4 below. The first 3 steps occur only when you create a new custom report.

1. **Report Title**
   Enter a name for the report, then click **Next>>**.



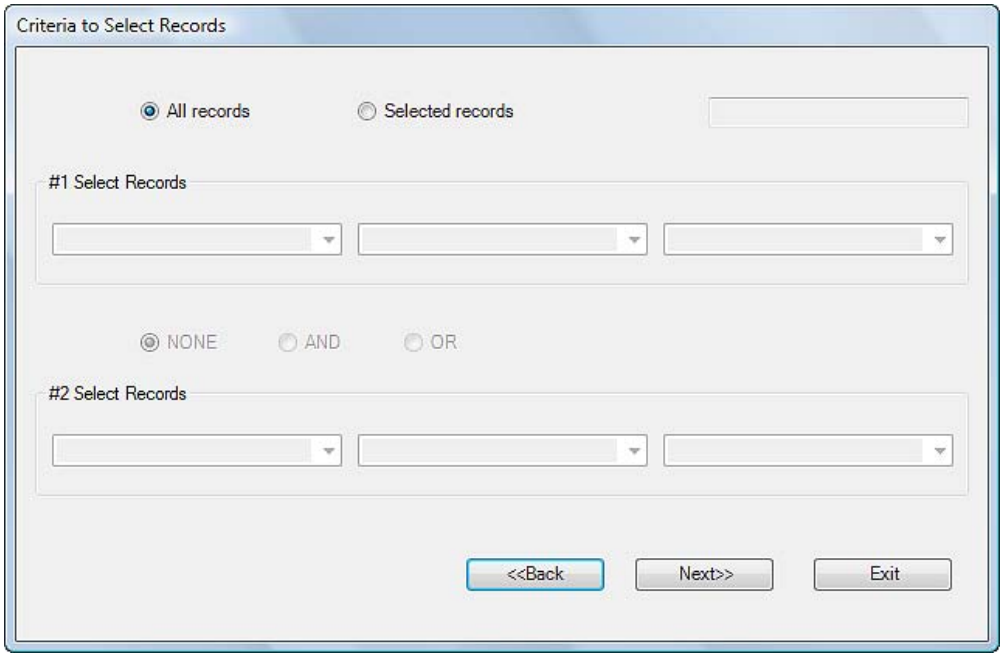
2. **Select Database Table**
   Lists the tables in the database that you can select to generate reports. Click the name to select the corresponding table then click **Next>>**.

3. **Select Fields to Include in Report**
   Displays all available fields from the selected database in the **Available Fields** column. To add fields to the report, select the field you want to use and then click **Add**. The field appears in the **Selected fields** list (filled top to bottom). To remove a field from the **Selected fields** column, select it and then click **Remove.** You can rearrange the order of the fields by clicking on the down arrow for the column and then selecting the field you want for that column. Click **Next>>** when finished.

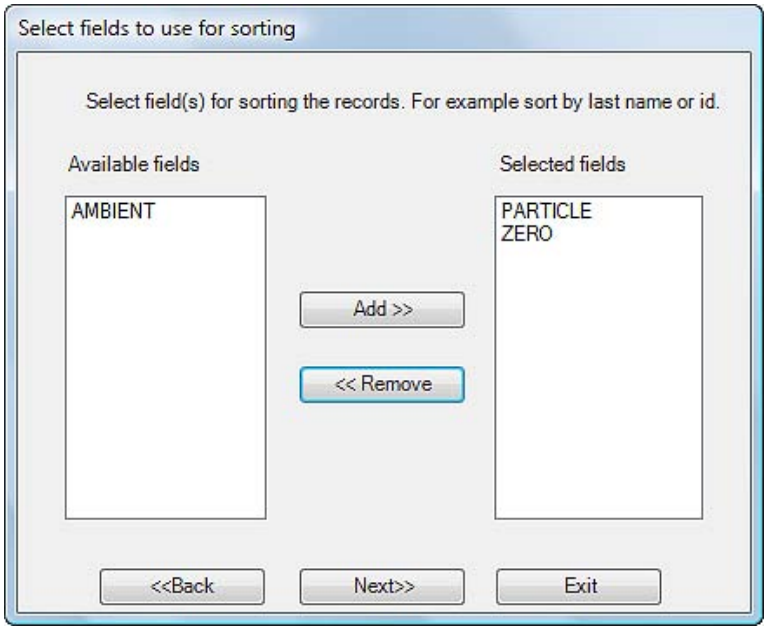


4. **Criteria to Select Records**
   The **Criteria to Select Records** dialog lets you select the records you want to appear in the report. If you want to include all records in the report, click **All records**. To include selected records only, click **Selected records** and then choose the field you want to use for filtering in **#1 Select Records.** You can select criteria such as **Company**, **Last Name**, etc. Then select the filtering operation, such as "equal to" or "greater than." And finally, the specific filter criteria, such as true/false. You can include a second criteria by clicking **AND** or **OR** and completing the **#2 Select Records** section. Click **NONE** to use no second criteria. Click **OR** to select records that satisfy the first or second criteria. Click **AND** to select records that satisfy the first criteria and the second criteria.

   When finished selecting criteria, click **Next>>** to continue.



5. **Select fields to use for sorting**
   This dialog lets you select a set of fields on which to sort the records. The order of the fields in this column determines the sort order of the fields in your report. To add a field for sorting, highlight the field name in the **Available fields** column and click **Add.** You can add up to four fields for sorting. Any fields you add to the list appear in the **Selected fields** column. To remove sort fields, highlight them in the **Selected fields** column and click **Remove**. The name moves back to the **Available fields** column and is not used for sorting. Click **Next>>** to advance to the next dialog of the wizard.



Report Examples

The following examples include instructions for generating two different types of reports:

- Modified Fit Test report
- Past Due report

Although these are only a representative sample of the many reports you can generate with FITPRO™ software, the examples show how to navigate through the report dialog boxes and should provide some basic guidelines for generating other types of reports.

Example 1 – Modified Fit Test Report

Follow the steps below to generate a modified report showing the results for a selected set of fit tests.

1. Select **Report | Select Report,** The Report Selection dialog appears. The dialog obtains the data from the active database. If you want to use a different database, click **Select Database** and choose another one. The name of the database used for the report always appears across the top of the dialog box.
2. Click **Fit Test Report** to highlight it.
3. Click **Modify Report** to choose the records you want to include in the report. For example, click **Selected Records** and choose **Due Date greater than *mm/dd/yyyy***, using whatever date you want.
4. Click **And** for the **#2 filter**. Choose **Due Date less than *mm/dd/yyyy***, using whatever date you want.
5. Click **Next>>.**
6. Choose the fields to use for sorting, for example, **Last Name** and **ID number**. If you do not select any fields, the report is sorted on default criteria, which in this case is the test date.
7. Click **Next>>.**
8. Choose **View Report**. The report includes all people due for the dates you entered.

Example 2 – Past Due Report

Follow the steps below to generate a past due report.

1. Select **Report | Select Report**. From the **Report List** window, highlight **Past Due Report**.
2. Click **View Report** and the **Past Due Months** dialog appears.
3. Enter the number of months back to search for past due records. Click **OK** to generate the report. The number you entered is the number of months to look backwards for people who were skipped. For example, if you select 12 months and the current date is January 1, 2008, everyone who should have been tested but was not tested between January 1, 2007, and January 1, 2008, will be listed in the report.

   ***Note**: The Past Due report gathers data from the Fit Test Table and identifies people who were fit tested at least once and are now overdue for another test. It does not identify people who have records in the People Table and have never been fit tested.*

FITPRO™ Software Printing

Windows Internet Explorer® Version Differences

Under Internet Explorer® Version 7 you can select and save default report and card print settings such as printer selection, page orientation, and margins. Select menu **File | Report Print Settings** or **File | Card Print Settings** to display the Page Setup dialog, where you can set those defaults. If you have elected to automatically print Fit Test reports on the **Global FitPro Options** form, then at the end of a Fit Test the report will automatically be printed from the selected report printer and a Fit Test card will be automatically printed from the selected card printer. You can also change these defaults when you are viewing a report or card on the **Report View** form, by clicking the **Print Setup** button. If you are viewing a report, this will change the defaults for reports. If you are viewing a card, this will change the defaults for cards.

Under Windows Internet Explorer® Version 8.0.6001 (the latest as of this document), FITPRO™ software cannot print "silently" after a Fit Test. When you elect to automatically print Fit Test reports on the **Global FitPro Options** form, a report will be printed at the end of each Fit Test but just before it is printed, a Print Dialog will be displayed and you can select the printer and click the **OK** button. If you have also elected to print a Fit Test card, at the end of each Fit Test another Print Dialog will be displayed and you can select the card printer and click **OK** to print the card.

Windows Vista® Operating System

Under Windows Vista® operating system, the Printer button has been removed from the Page Setup dialog, so if you select menu **File | Report Print Settings** you will get the Page Setup dialog and you will be able to set report margins and page orientation, but you will not be able to select the printer. If no default printer has been selected previously for reports, the system default printer will be the one that is selected for the Page Setup dialog. You can get around the fact that the Printer button is missing by doing the following. Set the Windows system default printer to the one you want for reports before using menu **File | Report Print Settings** to set the report defaults. Then set the Windows® system default printer to the one you want for card printing before you set the card defaults using menu **File | Card Print Settings**.

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Appendix A

Print Fit Test Cards

A TSI Model 8907 Card Printer or equivalent is required to print fit test cards.

***Note**: TSI Incorporated does not warrant that FITPRO™ fit test card printing features will function properly with the wide variety of card printers available on the market. Use of a card printer other than the model(s) offered by TSI is done at your own risk. TSI believes that FITPRO™ card printing features will work with most Windows-compatible card printers.*

Printer Setup

***Note**: You must install the Windows® print driver **before** attempting to print fit test cards for the first time.*

Although the Fargo DTC300 (or C30) Card Printer supplied with the TSI Model 8907 Card Printer Kit is capable of printing in color, FITPRO™ software does **not** support color. The printer ribbon supplied with the kit is the "K – Premium Resin" black only ribbon.

***Note**: Attempting to print a fit test card with the Fargo DTC300 (or C30) without first setting the proper ribbon type results in a "Wrong Ribbon Installed" error message.*

1. Get the card printer ready as follows:
   - Install the printer ribbon.
   - Connect the AC power supply.
   - Load blank cards into the input hopper.
   - **DO NOT** connect the USB cable to your PC until prompted to do so.
2. Insert the Fargo Software Installation CD (included with the card printer) into your CD-ROM drive and follow the on-screen instructions for installing the Fargo DTC300 (or C30) print driver. This needs to be done only one time.
   - When prompted, select USB as the printer port.
   - When prompted, click the **Detect Installed Ribbon Type** button.
   - Follow the remaining prompts to complete the driver installation.

   ***Note** The "Found new hardware" message may appear on the monitor. Be patient and allow the PC to do its work. The message disappears after a short time.*

   If the **Detect Installed Ribbon Type** dialog does not appear during driver installation, it will be necessary to manually set the ribbon type using the following procedure:
   - Open the Windows® Printer Control Panel.
   - Right-click on the **Card Printer** icon.
   - Select **Printing Preferences.**
   - Click on the **Device Options** tab.
   - Click on the **Auto Ribbon Select** button.

3. Start FITPRO™ software on your PC. When the desktop appears, select **Setup** | **Global Fit Test Options**.
4. From the Global Fit Test Options dialog, click **Fit Test Card Options**.

   Note: *The first time you do this, you will get an Install Card Printer dialog message. Read and follow the directions in that message and click **OK**.*
5. When the Fit test card options dialog appears, click **Change Settings** to access the card layout screen.
6. From the card layout screen click **Print Setup** button. This opens the **Page Setup** dialog (Figure A-1). Click **Printer** button to open a dialog where you can select the printer from a list of available printers.

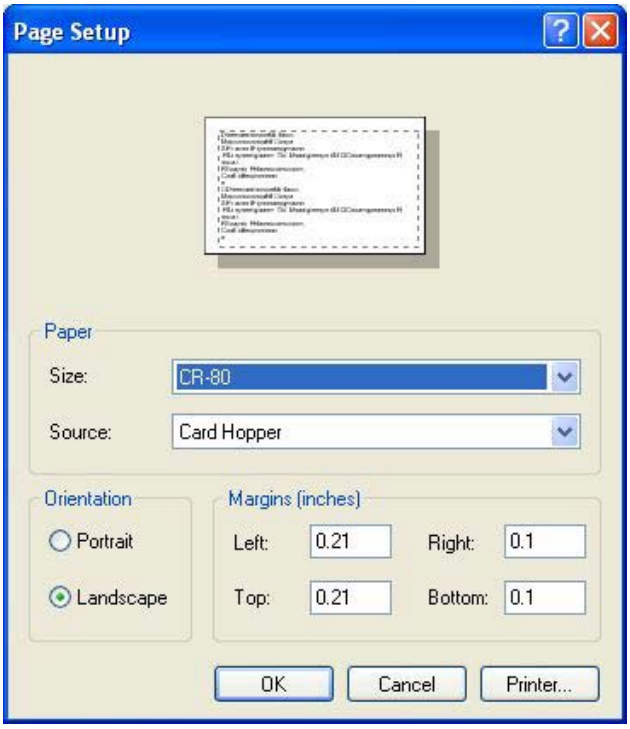

Figure A-1. Page Setup Dialog

- Select the **DTC300 Card Printer** (or C30e Card Printer). Click **OK** to return to the Page Setup dialog.
- Select the card size from the Paper Size list.
- Select **Landscape** for orientation and select margins.
- Click **OK** button.

Note: *If the card printer is not on the list of available printers, it means that the card printer driver has not been installed properly. Go back to step 1 of this procedure.*

7. Card printing should now be functional. To print a test card, click **Print** button on the **Change Settings** dialog. You should see a print confirmation window pop up briefly and a sample card should print.

To access the Fit Test Card Options dialog in FITPRO™ software:

1. Select **Setup** | **Global Fit Test Options**.
2. Click **Fit Test Card Options**. The following dialog appears (Figure A-2).

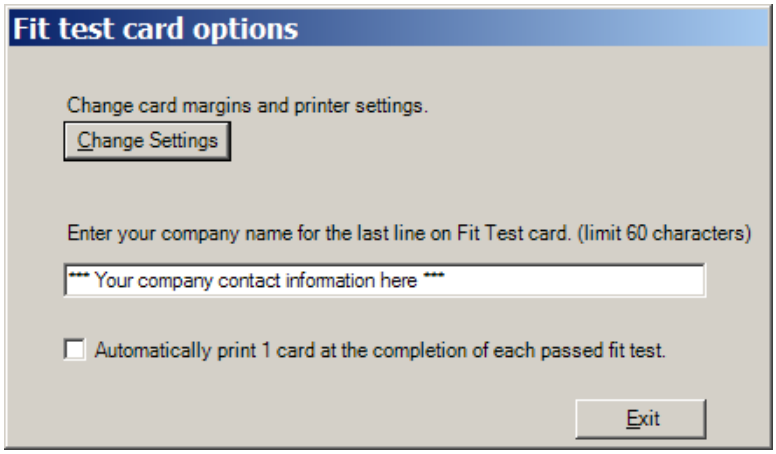
Fit test card options
Change card margins and printer settings.
Change Settings
Enter your company name for the last line on Fit Test card. (limit 60 characters)
*** Your company contact information here ***
Automatically print 1 card at the completion of each passed fit test.
Exit

Figure A-2. Fit Test Card Options

If you want to automatically print a fit test card at the completion of each passed fit test, check the box labeled **Automatically Print 1 Card…** This option is disabled by default. Fit test cards can be printed at any time from the **Edit Fit Test Table** dialog described in Chapter 2.

Note: *Fit test cards can only be printed one at a time. There is no batch printing function.*

To adjust the layout of the fit test card, click **Change Settings**. This displays the dialog shown in Figure A-3. Click the **Print Setup** button to display the **Page Setup** screen where you can adjust margins and select card size and orientation. Click the **Print Preview** button to see what the card will look like before printing it. Click the **Print** button to print the card.

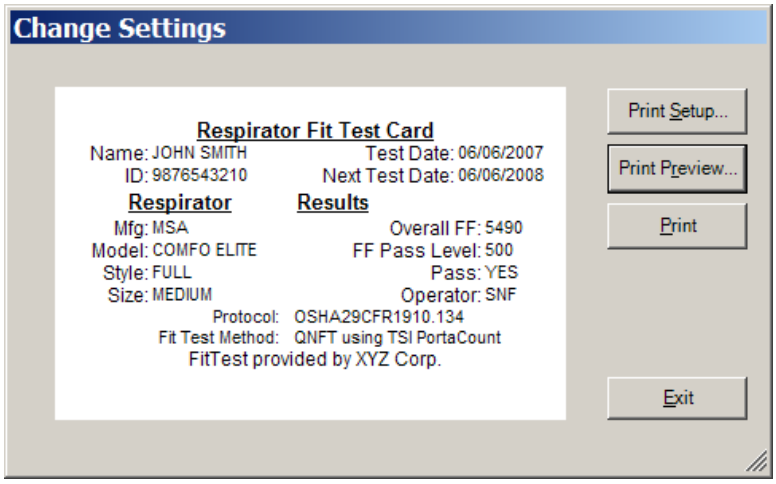

Figure A-3. Change Settings Dialog

Note: *This screen shows sample data on the fit test card that is provided to help adjust the layout. The actual fit test data for a particular individual automatically fills in whenever you print a card for a person.*

TSI Model 8907 Supplies and Specifications (Fargo DTC300 and C30 Card Printer)

The Model 8907 Card Printer offered by TSI Incorporated includes either the Model DTC300 or Persona C30 Card Printer manufactured by Fargo Electronics. These printers are warranted by Fargo Electronics and not by TSI Incorporated. Please contact Fargo Electronics if repairs are needed.

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6533 Flying Cloud Drive
Eden Prairie, MN 55344
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Phone: (800) 459-5636 or (952) 941-9470
Fax: (952) 941-7836
E-mail: sales@fargo.com

Example Fit Test Card

TSI Model 8907 Card Printer
(Fargo C30 shown)

Note: *The Fargo DTC300 and Fargo Persona C30 card printers are functionally equivalent as far as FITPRO™ software is concerned. The C30 has no LCD display and has limited upgrade options.*

Reordering Card Printer Supplies

Supplies for the Fargo DTC300 and C30 Card Printers (TSI Model 8907)

TSI Part Number	Description
1204058	Black Ribbon Cartridge for Fargo C30/DTC300
1204050	Box of 500 Blank CR-80 Cards (white, PVC, 0.030 in. thick)

Specifications* for Fargo C30 and DTC300 (TSI Model 8907) Card Printer

Print Method	Dye-Sublimation/Resin Thermal Transfer
Resolution	300 dpi (11.8 dots/mm)
Colors	Up to 16.7 million / 256 shades per pixel
Print Ribbon Options	Color or monochrome
Print Speed	7 seconds per card (black), 27 seconds (color)
Accepted Card Sizes (LW)	CR-80 3.375 × 2.125 in. (85.6 × 54 mm)
Maximum Print Area (LW)	CR-80 edge-to-edge 3.37 × 2.11 in. (85.5 × 53.5 mm)
Accepted Card Thickness	0.030 in. (0.76 mm) or 0.020 in. (0.51 mm)
Card Types	PVC or polyester cards with polished PVC finish; monochrome resin required for straight polyester
Card Capacity	100 PVC cards (0.030 in.)
Memory	2 MB RAM
Software Drivers	Windows® 2000/XP/Vista®
Interface	USB 1.1 (USB 2.0 compatible)
Operating Temperature	65° to 80°F (18° to 27°C)
Dimensions (HWD)	7.9 × 13.62 × 8.14 in. (201 × 346 × 207 mm)
Weight	8 lbs. (3.63 kg)
Agency Listings	Safety: UL 60950-1, CSA C22.2 (60950) UL-GS (EN 60950-1) and CE Emissions: ITS (EN 55022 Class B), FCC (EN 55042 Class B), CRC c1374w and CE (IEC-801 -2, -3, -4; CISPR 22, Class B), CE, BSMI
Supply Voltage & Frequency	100-240 VAC, 3.3 A, 50/60 Hz
Fargo Electronics Warranty	Printer – Two years Printhead – Two year/unlimited-pass with UltraCard™ cards

**Specifications are subject to change without notice.*

UltraCard is a trademark of FARGO Electronics, Incorporated

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Appendix B

Advanced FITPRO™ Software Installation Instructions

This appendix is intended for IT or advanced users.

The installation CD contains all installation files for FITPRO™ software, including SQL Server® Express and DotNet 2.0.

Database Details

SQL Server Express is installed with default users:

- User Id: "FitProUser" (case sensitive); password "FitPro$User" (case sensitive)
- database administrator User Id: "sa"; password "FitPro$User" (case sensitive).
- Instance name TSIFITPRO. This prevents incompatibility between different software applications that use Microsoft® SQL Server® Express.

FITPRO™ software can only work with the SQL Server® Express database application. FITPRO™ software cannot be used with a database on a company SQL server due to restrictions of the instance name TSIFITPRO.

Extensive documentation exists on the Microsoft® website for SQL Server® Express. One source is at the following link:

http://msdn2.microsoft.com/en-us/express/aa718391.aspx

Configure SQL Server for a Database on Network

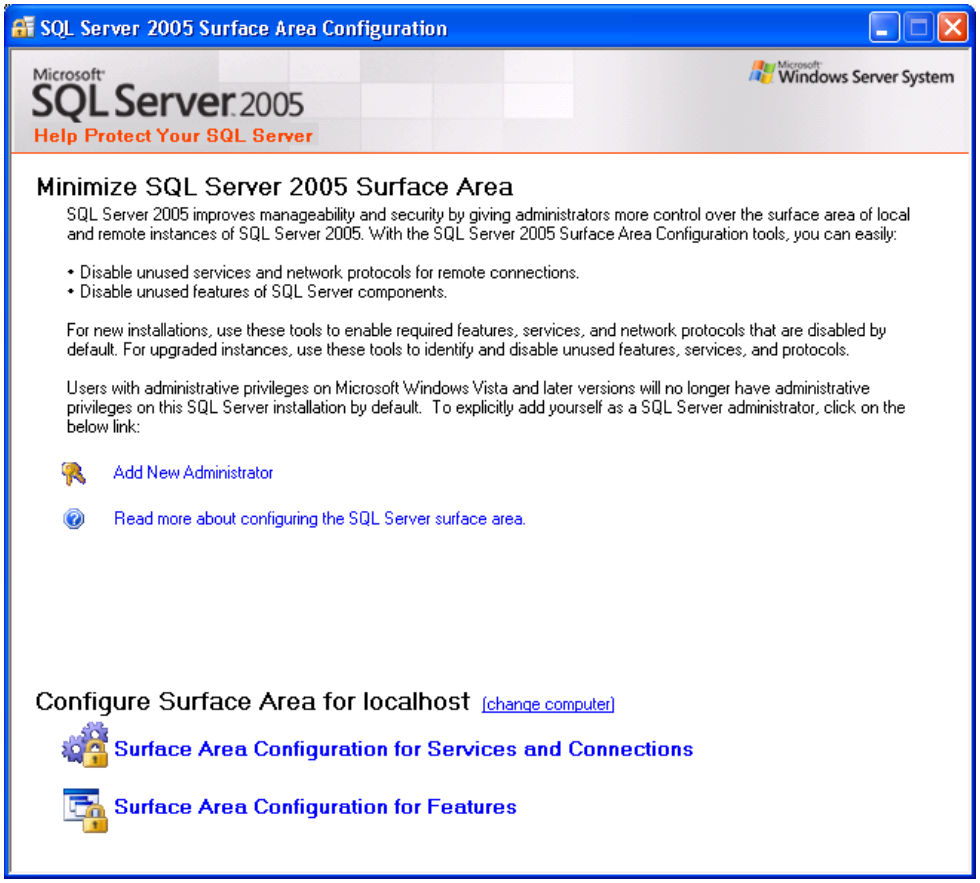
By default, the FITPRO™ software installation program installs Microsoft® SQL Server® Express 2005 on the user's computer. A default database is created in the C:\Fitpro folder.

***Note**:* *Microsoft® SQL Server® 2005 Express Edition database can only be accessed on a computer or server on which Microsoft SQL Server® 2005 Express Edition is installed. Usually, the network drive is only a file server not a SQL server. The remote database can be on a server or a computer on the network which can be accessed by the user's computer which is referred to as the client computer. Microsoft SQL Server® 2005 Express Edition does not allow you to store database files on the network but only on the server hard drive.*

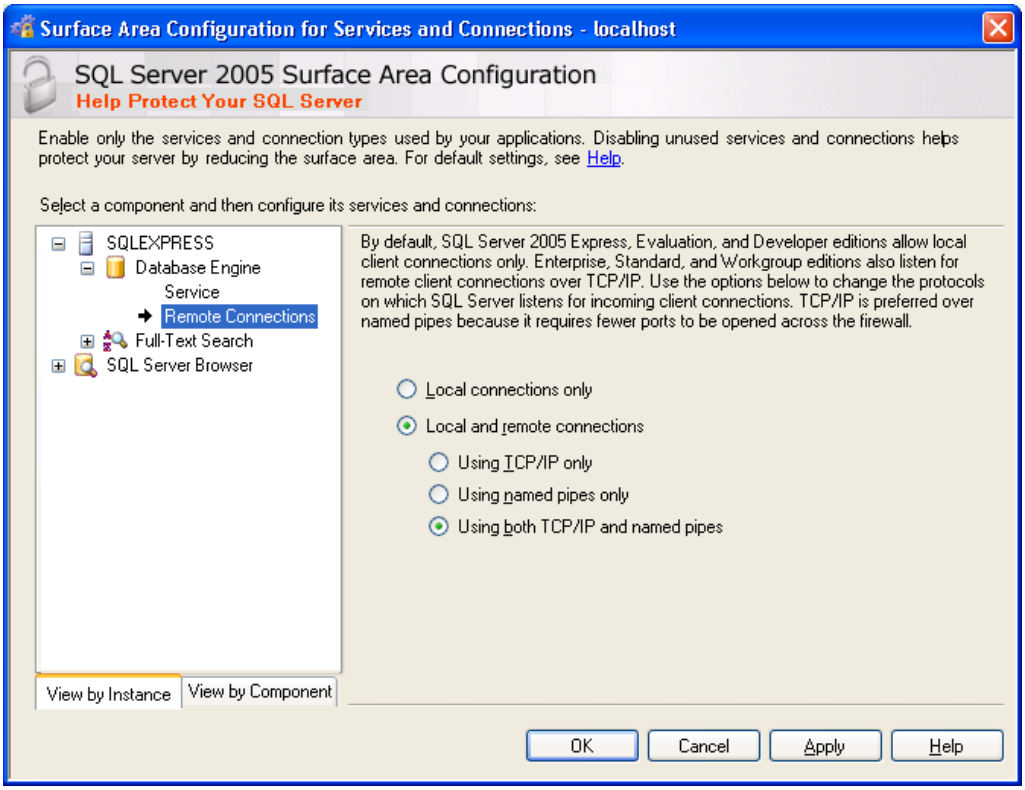
If you want to locate the database on a server, then FITPRO™ software can connect to this database only if the following conditions are configured:

- On the server machine, install the FITPRO™ software. This will also install Microsoft® SQL Server® 2005 Express. Create a "FitPro" folder and share it on the network with the name "FitProDatabase." Using file explorer on the user's computer, confirm the configuration by navigating to the server and finding the "FitProDatabase" folder.

- Select **Start | All Programs | SQL server 2005 | configuration tools | Surface Area Configuration**. The following screen will be displayed. Select **Surface Area Configuration for Services and Connections**.


SQL Server 2005 Surface Area Configuration
Microsoft
SQL Server 2005
Help Protect Your SQL Server
Microsoft Windows Server System
Minimize SQL Server 2005 Surface Area
SQL Server 2005 improves manageability and security by giving administrators more control over the surface area of local and remote instances of SQL Server 2005. With the SQL Server 2005 Surface Area Configuration tools, you can easily:
• Disable unused services and network protocols for remote connections.
• Disable unused features of SQL Server components.
For new installations, use these tools to enable required features, services, and network protocols that are disabled by default. For upgraded instances, use these tools to identify and disable unused features, services, and protocols.
Users with administrative privileges on Microsoft Windows Vista and later versions will no longer have administrative privileges on this SQL Server installation by default. To explicitly add yourself as a SQL Server administrator, click on the below link:
Add New Administrator
Read more about configuring the SQL Server surface area.
Configure Surface Area for localhost [change computer]
Surface Area Configuration for Services and Connections
Surface Area Configuration for Features

After selecting **Surface Area Configuration for Services and Connections**, the following screen is displayed.


Surface Area Configuration for Services and Connections - localhost
SQL Server 2005 Surface Area Configuration
Help Protect Your SQL Server
Enable only the services and connection types used by your applications. Disabling unused services and connections helps protect your server by reducing the surface area. For default settings, see Help.
Select a component and then configure its services and connections:
SQLEXPRESS
Database Engine
Service
Remote Connections
Full-Text Search
SQL Server Browser
By default, SQL Server 2005 Express, Evaluation, and Developer editions allow local client connections only. Enterprise, Standard, and Workgroup editions also listen for remote client connections over TCP/IP. Use the options below to change the protocols on which SQL Server listens for incoming client connections. TCP/IP is preferred over named pipes because it requires fewer ports to be opened across the firewall.
Local connections only
Local and remote connections
Using TCP/IP only
Using named pipes only
Using both TCP/IP and named pipes
View by Instance
View by Component
OK
Cancel
Apply
Help

Select **Local and remote connections** and **Using both TCP/IP and named pipes**.

Now the SQL server on the computer can accept remote connections from another computer. Select **Apply** and then exit all screens.

Note: *If you are running a firewall on the computer that is running SQL Server® 2005, external connections to SQL Server® 2005 will be blocked unless SQL Server® 2005 and the SQL Server® Browser service can communicate through the firewall. You must create an exception for each instance of SQL Server® 2005 that you want to accept remote connections and an exception for the SQL Server® Browser service.*

Read the Microsoft Knowledge base article KB 914277 "How to configure SQL Server® 2005 to allow remote connections".
http://support.microsoft.com/kb/914277

On the user's computer, start FITPRO™ software application and select the **Change Active Database form**. For database name, browse to the shared folder "FitProDatabase" that you created on the server computer and select FitProData.mdf. the string should be similar to \\SERVERNAME\FitProDatabase\FitProData.mdf.

Select **OK** and confirm that no errors are reported.

Select **Database** | **Edit** | **People** or to create a new person. On the server computer, select **Start | All Programs | SQL server 2005 | SQL Server Management Studio Express** to view the FITPRO™ software database and confirm the new entry in the people table.

Index

A

about FITPRO software, 28
about this manual, vii
advanced edit records, 53
advanced edit/delete, 53
ambient purge time, 37
ambient sample time, 37
apply custom names, 50
apply names to custom fields, 51
auto description field, 39
automatic print, 6
automatic save, 6
automatic termination, 6

B

backup database, 45, 46

C

C30 card printer, 66
calendar, 47
card print settings, 22
card printer
  changing settings, 64
  detect installed ribbon type, 63
  detect installed ribbon type dialog does not appear, 63
  fit test card options, 64
  model 8907, 66
  select printer port, 63
  setup, 63
change active database, 2
  create new, 4
change database, 6
change global FitPro options, 27
change settings, 64, 65
communication ports
  selecting, 27
company, 40
computer requirements
  FITPRO software, 1
concentration
  radio button, 24
conduct fit test, 16
configuration, 6
connect PORTACOUNT PRO Respirator Fit Tester, 9
conventions, manual, vii
convert database, 48
convert FitPlus v3 to FITPRO, 19
copy a database, 41
create a new database, 4
create new report, 56
creating reports, 55
criteria to select records, 57, 58, 59
custom, 41
custom field names, 7
custom names, apply, 50
custom reports, 55

D

daily check results report, 55
daily checks, 26
  performing, 24
database
  backup, 45, 46
  convert, 48
  merging, 48
database copy, 41
database exchange, 30
database menu, 29
  advanced edit/delete, 53
  backup database, 45, 46
  calendar, 47
  convert database, 48
  database values, 47
  excel format, 43
  fit test table, 39
  merging databases, 48
  move/copy data, 51
  opening and editing database table, 32
  people table, 32
  protocol table, 35
  report examples, 60
  respirator table, 38
  restore database, 45
database table
  editing, 32
  opening, 32
database values, 47
date and number formats, 6
delete, 39, 40
delete data after move, 52
delete report, 56
description, 39
detect installed ribbon type, 63
dialog box
  advanced edit records, 53
  apply names to custom fields, 51
  backup database, 45
  change settings, 65

dialog box *(continued)*
daily checks, 26
edit fit test table, 40
edit people table, 33
edit protocol table, 35
edit respirator table, 38
export data in CSV format, 44
export data in Excel format, 43
fit test card options, 65
flash drive database exchange, 31
make a copy of database, 42
merge database, 49
move/copy data from one database to another, 52
page setup, 22, 64
real time fit factor display, 24
restore database, 46
sample timing, 37
select a person, 12
select address, 28
select report, 56
split database by date, 47
display real-time fit factors, 23
DTC300 card printer, 66
due date, 40

E

edit database table, 32
edit fit test table, 39, 40, 65
edit people table, 32, 33
edit protocal table, 35
edit protocol table, 35
edit respirator table, 38
excel format, 43
exchange database, 30
exclude, 36
exercise name, 36, 37
exit, 23, 36, 39, 56
export data, 43
export data in CSV format, 44
export data in Excel format, 43
export database in Excel format, 43

F

Fargo DTC300 card printer, 66
Fargo Persona C30 card printer, 66
Fargo software installation CD, 63
file menu, 22
card print settings, 22
report print settings, 22
filter efficiency, 39
firewall, 71
first name, 40
fit factor, 24
fit factor pass level, 39
fit test, 23
fit test card, 55
change settings, 65
options, 65
printing, 63
fit test card options, 6, 64, 65
fit test report, 55, 60
language support, 63
fit test table
editing, 39
viewing, 39
FITPRO software
advanced instructions, 69
computer requirements, 1
convert databases, 19
features, ix
fit testing with, 9
installation, 1
introduction, ix
program setup, 2
setup menu, 27
start, 9
FitProData.mdf, 29
FitProDatabase, 69
FITPRO™ software printing, 61
flash drive, 30
database exchange, 30, 31
flash drive database exchange, 31
format, 6

G

global fit test options, 65
global FitPro options, 5
change, 27

H

help menu, 28
hide ID number, 6

I–J

ID number, 40
illegal entries, 54
introduction, ix
FITPRO software, ix

K

K-Premium Resin, 63

L

language support for fit test report, 63
language, select, 7
last name, 40
location, 40

M

make a copy of database, 42
manual
  conventions, vii
manufacturer name field, 39
mask purge time, 37
mask sample time, 37
mask size, 40
menu options, 21
merge database, 49
merge databases, 48
model, 39
model 8907 card printer, 66
model name, 36
modify report, 55, 57
move selected data, 52
move/copy data, 51
move/copy data from one database to another, 52
multi-respirator fit test card, 55

N

new, 36, 39
next due report, 55
next test due in __ months field, 36
note, 40

O

open database
  table, 32
operator, 40
overall fit factor field, 40
overall pass, 40

P–Q

page setup, 22, 64
page setup dialog, 64
pass level, 40
past due report, 55
people report, 55
people table
  editing, 32
  viewing, 32
perform daily checks, 24
PortaCount M/N, 40
PORTACOUNT menu, 23
PORTACOUNT PRO
  connecting, 9
pre-defined reports, 55
print, 64
print card, 41
print fit test card, 63
print preview, 65
print report, 41, 55
print setup, 64, 65
protocol, 41
protocol information, 13, 15
protocol name field, 36
protocol table
  editing, 35
  viewing, 35

R

real time fit factor display, 24
real-time ambient concentration, 23
  viewing, 24
real-time fit factor, 23
report details, 56, 57
report examples, 60
  fit test report, 60
  past due report, 60
report list, 56, 57
report menu, 27
report print settings, 22
report printing, creating and modifying, 55
report selection, 55
report title, 57
report wizard, 57
respirator, 41
respirator approval field, 39
respirator list, 39
respirator report, 55
respirator table
  editing, 38
  viewing, 38
restore database, 45, 46

S

sample timing, 37
sample timing field, 36
save, 36, 39, 41
search, 41
select a person, 12
select address, 28
select communication ports, 27
select database, 57
select fields to include in report, 58
select fields to use for sorting, 59

select formatting, 7
select language, 7
select printer port, 63
select report, 55, 56
setup menu, 27
show signature lines on fit test report, 7
single fit test, 27
software license agreement, ii
sorted records, 41
split database by date, 47
start FITPRO software, 9
  with Vista, 10
style, 39

T

terminate fit test when fit factor for any exercise fails
  checkbox, 36
test date, 41
total exercise time, 37
total test time, 37
trademarks, vii
TSI website, viii

U

user configuration, 7
utilities submenu, 46

V

view fit test table, 39
view people table, 32
view protocol table, 35
view record, 17
view report, 57
view respirator table, 38
view results, 41

W–X–Y–Z

warn when fit factor is above…, 7
warning, 54
  data loss, 29
warranty, i
Windows Internet Explorer
  version differences, 61
Windows Vista operating system, 61

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